

Sequence Listing

- <110> Ashkenazi, Avi J.
 Baker, Kevin P.
 Botstein, David
 Desnoyers, Luc
 Eaton, Dan L.
 Ferrara, Napoleone
 Fong, Sherman
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 Goddard, Audrey
 Godowski, Paul J.
 Grimaldi, J. Christopher
 Gurney, Austin L.
 Kljavin, Ivar J.
 Napier, Mary A.
 Pan, James
 Paoni, Nicholas F.
 Roy, Margaret Ann
 Stewart, Timothy A.
 Tumas, Daniel
 Watanabe, Colin K.
 Williams, P. Mickey
 Wood, William I.
 Zhang, Zemin
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taaataccca cacctttttt tcgtaggtgg gcttttcccta tcagagcttg 2200
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<210> 6
 <211> 251
 <212> PRT
 <213> Homo sapiens

<400> 6
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 20 25 30
 Leu Gly Leu Ile Ser Pro Ala Tyr Leu Phe Leu Trp Pro Glu Ala
 35 40 45
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe
 50 55 60
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Tyr Leu Val Asn
 65 70 75
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala
 80 85 90
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn
 95 100 105

Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu
				110					115					120
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln
				125					130					135
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe
				140					145					150
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile
				155					160					165
Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly
				170					175					180
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly
				185					190					195
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu
				200					205					210
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala
				215					220					225
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His
				230					235					240
Asn	Trp	Gly	Gln	Gly	Phe	Arg	Leu	Gly	Asp	Gln				
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<210> 7

<211> 1373

<212> DNA

<213> Homo sapiens

<400> 7

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 gtcggcggt ctggcctagg gatcttcccc gttgccctt tggggcggga 200
 tggctgcgga agaagaagac gaggtggagt gggtagtga gagcatcgcg 250
 gggttctcgc gaggccaga ctggtccatc cccatcttgg actttgtgga 300
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 <211> 367
 <212> PRT
 <213> Homo sapiens

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 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His
 35 40 45
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys
 50 55 60
 Val Pro Leu Val Phe Asp Asp Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu
 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile
 140 145 150

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	155	160	165
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	170	175	180
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	185	190	195
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	200	205	210
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	215	220	225
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	230	235	240
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	245	250	255
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	260	265	270
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	275	280	285
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr	290	295	300
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met	305	310	315
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr	320	325	330
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu	335	340	345
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu	350	355	360
Lys	Glu	Glu	Val	Ile	Asn	Lys									365		

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 <211> 418
 <212> DNA
 <213> Homo sapiens

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 tgcacttctc ctcttgcaaa gaccataca tcacaggcca tttttgcaac 200
 ctgtgttggc agcagaagat ttactatct ttaaagcaat gatggtccag 250
 aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400
gaggaatatg accaggaa 418

<210> 10
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 10
ttgacctata cagagattca tc 22

<210> 11
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 11
ctaagaactt ccctcaggat ttt 23

<210> 12
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 12
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<210> 13
<211> 2886
<212> DNA
<213> Homo sapiens

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cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatgaaaa 200
acagtgtgtg agtcacctcg taatatgctc cttgtcaaca atgtatacat 250
tcttgctagg tgccatattc attgctttaa gctcaagtcg catcttacta 300
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350
tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 400
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<210> 14

<211> 424

<212> PRT

<213> Homo sapiens

<400> 14

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Thr	Met	Tyr	Thr	Phe	Leu	Leu	Gly	Ala	Ile	Phe	Ile	Ala	Leu	Ser
				20					25					30
Ser	Ser	Arg	Ile	Leu	Leu	Val	Lys	Tyr	Ser	Ala	Asn	Glu	Glu	Asn
				35					40					45
Lys	Tyr	Asp	Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu
				50					55					60
Val	Lys	Leu	Val	Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys
				65					70					75
Lys	Asp	His	Gln	Ser	Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu
				80					85					90
Phe	Ser	Asp	Phe	Met	Lys	Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe
				95					100					105
Leu	Asp	Asn	Leu	Ile	Val	Phe	Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro
				110					115					120

Ala Met Ala Val	Ile Phe Ser Asn Phe Ser Ile Ile Thr Thr	Ala
125	130	135
Leu Leu Phe Arg	Ile Val Leu Lys Arg Arg Leu Asn Trp Ile Gln	
140	145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu Ser Ile Val Ala Leu Thr	
155	160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn Leu Ala Gly Arg Gly Phe	
170	175	180
His His Asp Ala	Phe Phe Ser Pro Ser Asn Ser Cys Leu Leu Phe	
185	190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn Cys Thr Ala Lys Glu Trp	
200	205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr Thr Ala Arg Val Phe Ser	
215	220	225
His Ile Arg Leu	Gly Met Gly His Val Leu Ile Ile Val Gln Cys	
230	235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr Asn Glu Lys Ile Leu Lys	
245	250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile Phe Ile Gln Asn Ser Lys	
260	265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn Gly Leu Thr Leu Gly Leu	
275	280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys Asn Cys Gly Phe Phe Tyr	
290	295	300
Gly His Ser Ala	Phe Ser Val Ala Leu Ile Phe Val Thr Ala Phe	
305	310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu Lys Phe Leu Asp Asn Met	
320	325	330
Phe His Val Leu	Met Ala Gln Val Thr Thr Val Ile Ile Thr Thr	
335	340	345
Val Ser Val Leu	Val Phe Asp Phe Arg Pro Ser Leu Glu Phe Phe	
350	355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser Ile Phe Ile Tyr Asn Ala	
365	370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala Pro Arg Gln Glu Arg Ile	
380	385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu Arg Ser Ser Gly Asp Gly	
395	400	405
Glu Glu Leu Glu	Arg Leu Thr Lys Pro Lys Ser Asp Glu Ser Asp	
410	415	420
Glu Asp Thr Phe		

<210> 15
<211> 755
<212> DNA
<213> Homo sapiens

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cttta 755

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 16
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<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 17
tcagagaatt ccttcagga 20

<210> 18
<211> 40
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgcgtg agtcatoctg taatatgctc ctgtgcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

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<210> 20

<211> 458

<212> PRT

<213> Homo sapiens

<400> 20

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Trp	Ala	Glu	Pro	Gly	Met	Pro	Ser	Gln	Thr	Pro	Trp	Trp	Ala	Ser
		20							25					30

Ala	Ser	Ala	Asn	Pro	Pro	Gly	Pro	Ala	Trp	Val	Ala	Leu	Cys	Pro
			35						40					45

Gly	Ser	Ser	Ser	Pro	Arg	Pro	Trp	Pro	Ser	Leu	Pro	Thr	Ser	Ser
				50					55					60

Ser	Gly	Ser	Cys	Pro	Thr	Ser	His	Thr	Ala	Arg	Pro	Ile	Gly	Pro
				65					70					75

Cys	Phe	Ser	Ile	Ala	Ser	Leu	Lys	Gln	Trp	Ser	Arg	Val	Ser	Met
				80					85					90

Phe	Pro	Thr	Arg	Leu	Ser	Pro	Cys	Ser	Ser	Ala	Thr	Glu	Gln	Thr
				95					100					105

Glu Arg Asp Ser	Ala Thr Ala Tyr Arg	Met Thr Val Glu Val Leu	110	115	120
Gly Thr Val Leu	Gly Thr Ala Ile Gln Gly Gln Ile Val Gly Gln		125	130	135
Ala Asp Thr Pro	Cys Phe Gln Asp Phe Asn Ser Ser Thr Val Ala		140	145	150
Ser Gln Ser Ala	Asn His Thr His Gly Thr Thr Ser His Arg Glu		155	160	165
Thr Gln Lys Ala	Tyr Leu Leu Ala Ala Gly Val Ile Val Cys Ile		170	175	180
Tyr Ile Ile Cys	Ala Val Ile Leu Ile Leu Gly Val Arg Glu Gln		185	190	195
Arg Glu Pro Tyr	Glu Ala Gln Gln Ser Glu Pro Ile Ala Tyr Phe		200	205	210
Arg Gly Leu Arg	Leu Val Met Ser His Gly Pro Tyr Ile Lys Leu		215	220	225
Ile Thr Gly Phe	Leu Phe Thr Ser Leu Ala Phe Met Leu Val Glu		230	235	240
Gly Asn Phe Val	Leu Phe Cys Thr Tyr Thr Leu Gly Phe Arg Asn		245	250	255
Glu Phe Gln Asn	Leu Leu Leu Ala Ile Met Leu Ser Ala Thr Leu		260	265	270
Thr Ile Pro Ile	Trp Gln Trp Phe Leu Thr Arg Phe Gly Lys Lys		275	280	285
Thr Ala Val Tyr	Val Gly Ile Ser Ser Ala Val Pro Phe Leu Ile		290	295	300
Leu Val Ala Leu	Met Glu Ser Asn Leu Ile Ile Thr Tyr Ala Val		305	310	315
Ala Val Ala Ala	Gly Ile Ser Val Ala Ala Phe Leu Leu Pro		320	325	330
Trp Ser Met Leu	Pro Asp Val Ile Asp Asp Phe His Leu Lys Gln		335	340	345
Pro His Phe His	Gly Thr Glu Pro Ile Phe Phe Ser Phe Tyr Val		350	355	360
Phe Phe Thr Lys	Phe Ala Ser Gly Val Ser Leu Gly Ile Ser Thr		365	370	375
Leu Ser Leu Asp	Phe Ala Gly Tyr Gln Thr Arg Gly Cys Ser Gln		380	385	390
Pro Glu Arg Val	Lys Phe Thr Leu Asn Met Leu Val Thr Met Ala		395	400	405
Pro Ile Val Leu	Ile Leu Leu Gly Leu Leu Leu Phe Lys Met Tyr		410	415	420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
 425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
 440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu
 455

<210> 21
 <211> 571
 <212> DNA
 <213> Homo sapiens

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 accctatgaa gccacgacgt ctgagccaat cgcctacttc cggggcctac 150
 ggctgggtcat gagccacggc ccatacatca aacttattac tggcttccct 200
 ttccacctct tggctttcat gctgggtggag gggaactttg tcttgttttg 250
 caccctacacc ttgggcttcc gcaatgaatt ccagaatcta ctcttgacca 300
 tcatgctctc ggccacttta accattccca tctggcagtg gttottgacc 350
 cggtttgcca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
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 cggtagctgt ggacgctggc atcagtggtg cagctgcctt cttactaccc 500
 tgggtccatgc tgccgtgatgt cattgacgac ttccatctga agcagcccca 550
 cttccatgga accgagcca t 571

<210> 22
 <211> 1173
 <212> DNA
 <213> Homo sapiens

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 cttccttcag cccttgtaat ttggacatct gctgctttca tattttcata 200
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 aatattgcgg cagttttatg cattgctacc atttatgttc gttataagca 350
 agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaaccaagg 400
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 gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
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<210> 23
 <211> 266
 <212> PRT
 <213> Homo sapiens

<400> 23
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 Val Thr Leu His His Ile Asp Pro Ala Leu Pro Tyr Ile Ser Asp
 35 40 45
 Thr Gly Thr Val Ala Pro Glu Lys Cys Leu Phe Gly Ala Met Leu
 50 55 60
 Asn Ile Ala Ala Val Leu Cys Ile Ala Thr Ile Tyr Val Arg Tyr
 65 70 75
 Lys Gln Val His Ala Leu Ser Pro Glu Glu Asn Val Ile Ile Lys
 80 85 90
 Leu Asn Lys Ala Gly Leu Val Leu Gly Ile Leu Ser Cys Leu Gly
 95 100 105
 Leu Ser Ile Val Ala Asn Phe Gln Lys Thr Thr Leu Phe Ala Ala
 110 115 120
 His Val Ser Gly Ala Val Leu Thr Phe Gly Met Gly Ser Leu Tyr
 125 130 135

Met Phe Val Gln Thr Ile Leu Ser Tyr Gln Met Gln Pro Lys Ile
140 145 150

His Gly Lys Gln Val Phe Trp Ile Arg Leu Leu Leu Val Ile Trp
155 160 165

Cys Gly Val Ser Ala Leu Ser Met Leu Thr Cys Ser Ser Val Leu
170 175 180

His Ser Gly Asn Phe Gly Thr Asp Leu Glu Gln Lys Leu His Trp
185 190 195

Asn Pro Glu Asp Lys Gly Tyr Val Leu His Met Ile Thr Thr Ala
200 205 210

Ala Glu Trp Ser Met Ser Phe Ser Phe Phe Gly Phe Phe Leu Thr
215 220 225

Tyr Ile Arg Asp Phe Gln Lys Ile Ser Leu Arg Val Glu Ala Asn
230 235 240

Leu His Gly Leu Thr Leu Tyr Asp Thr Ala Pro Cys Pro Ile Asn
245 250 255

Asn Glu Arg Thr Arg Leu Leu Ser Arg Asp Ile
260 265

<210> 24
<211> 485
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 14, 484
<223> unknown base

<400> 24
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gagcggagat cctcaaacgg cctagtgcctt cgcgcttcgg gagaaaatca 150
gcggtctaata taattcctct ggtttgttga agcagttacc aagaatcttc 200
aaccccttcc cacaaaagct aattgagtac acgttcctgt tgagtacaag 250
ttctgttga tttacaaaag gtgcaggtat gagcaggtc gaagactaac 300
attttgtgaa gttgtaaaac agaaaacctg ttgaaaatgt ggtggtttca 350
gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgtgt 400
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gctttacett atatcagtga cactggtaca gtanc 485

<210> 25
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 25
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 <210> 26
 <211> 46
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 26
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 <210> 27
 <211> 1399
 <212> DNA
 <213> Homo sapiens

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[illegible]

<211> 264

<213> Home

<213> Homo sapiens

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35 40 45

Ser Asp Leu Ala Glu Leu Arg Glu Leu Ser Glu Val Leu Arg Glu
50 55 60

Tyr Arg Lys Glu His Gln Ala Tyr Val Phe Leu Leu Phe Cys Gly
65 70 75

Ala Tyr Leu Tyr Lys Gln Gly Phe Ala Ile Pro Gly Ser Ser Phe
80 85 90

Leu Asn Val Leu Ala Gly Ala Leu Phe Gly Pro Trp Leu Gly Leu
95 100 105

Leu Leu Cys Cys Val Leu Thr Ser Val Gly Ala Thr Cys Cys Tyr
110 115 120

Leu Leu Ser Ser Ile Phe Gly Lys Gln Leu Val Val Ser Tyr Phe
125 130 135

Pro Asp Lys Val Ala Leu Leu Gln Arg Lys Val Glu Glu Asn Arg
140 145 150

Asn Ser Leu Phe Phe Phe Leu Leu Phe Leu Arg Leu Phe Pro Met
155 160 165

Thr Pro Asn Trp Phe Leu Asn Leu Ser Ala Pro Ile Leu Asn Ile
170 175 180

Pro Ile Val Gln Phe Phe Phe Ser Val Leu Ile Gly Leu Ile Pro
185 190 195

Tyr Asn Phe Ile Cys Val Gln Thr Gly Ser Ile Leu Ser Thr Leu
200 205 210

Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu
				215					220					225
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys
				230					235					240
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala
				245					250					255
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr						
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<210> 29

<211> 1292

<212> DNA

<213> Homo sapiens

<400> 29

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tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
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<210> 30

<211> 347

<212> PRT

<213> Homo sapiens

<400> 30

Met	Asp	Leu	Ala	Ala	Asn	Glu	Ile	Ser	Ile	Tyr	Asp	Lys	Leu	Ser	1	5	10	15
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Ser	Glu	Lys	Ala	Ile	Glu	Lys	Phe	Ile	Arg	Gln	Leu	Leu	Glu	Lys	35	40	45	
Asn	Glu	Pro	Gln	Arg	Pro	Pro	Pro	Gln	Tyr	Pro	Leu	Leu	Ile	Val	50	55	60	
Val	Tyr	Lys	Val	Leu	Ala	Thr	Leu	Gly	Leu	Ile	Leu	Leu	Thr	Ala	65	70	75	
Tyr	Phe	Val	Ile	Gln	Pro	Phe	Ser	Pro	Leu	Ala	Pro	Glu	Pro	Val	80	85	90	
Leu	Ser	Gly	Ala	His	Thr	Trp	Arg	Ser	Leu	Ile	His	His	Ile	Arg	95	100	105	
Leu	Met	Ser	Leu	Pro	Ile	Ala	Lys	Lys	Tyr	Met	Ser	Glu	Asn	Lys	110	115	120	
Gly	Val	Pro	Leu	His	Gly	Gly	Asp	Glu	Asp	Arg	Pro	Phe	Pro	Asp	125	130	135	
Phe	Asp	Pro	Trp	Trp	Thr	Asn	Asp	Cys	Glu	Gln	Asn	Glu	Ser	Glu	140	145	150	
Pro	Ile	Pro	Ala	Asn	Cys	Thr	Gly	Cys	Ala	Gln	Lys	His	Leu	Lys	155	160	165	
Val	Met	Leu	Leu	Glu	Asp	Ala	Pro	Arg	Lys	Phe	Glu	Arg	Leu	His	170	175	180	
Pro	Leu	Val	Ile	Lys	Thr	Gly	Lys	Pro	Leu	Leu	Glu	Glu	Glu	Ile	185	190	195	
Gln	His	Phe	Leu	Cys	Gln	Tyr	Pro	Glu	Ala	Thr	Glu	Gly	Phe	Ser	200	205	210	
Glu	Gly	Phe	Phe	Ala	Lys	Trp	Trp	Arg	Cys	Phe	Pro	Glu	Arg	Trp	215	220	225	
Phe	Pro	Phe	Pro	Tyr	Pro	Trp	Arg	Arg	Pro	Leu	Asn	Arg	Ser	Gln	230	235	240	
Met	Leu	Arg	Glu	Leu	Phe	Pro	Val	Phe	Thr	His	Leu	Pro	Phe	Pro	245	250	255	

Lys	Asp	Ala	Ser	Leu	Asn	Lys	Cys	Ser	Phe	Leu	His	Pro	Glu	Pro
				260					265					270
Val	Val	Gly	Ser	Lys	Met	His	Lys	Met	Pro	Asp	Leu	Phe	Ile	Ile
				275					280					285
Gly	Ser	Gly	Glu	Ala	Met	Leu	Gln	Leu	Ile	Pro	Pro	Phe	Gln	Cys
				290					295					300
Arg	Arg	His	Cys	Gln	Ser	Val	Ala	Met	Pro	Ile	Glu	Pro	Gly	Asp
				305					310					315
Ile	Gly	Tyr	Val	Asp	Thr	Thr	His	Trp	Lys	Val	Tyr	Val	Ile	Ala
				320					325					330
Arg	Gly	Val	Gln	Pro	Leu	Val	Ile	Cys	Asp	Gly	Thr	Ala	Phe	Ser
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Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

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<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

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cagccgccga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050
gctgtagacc tggaccatgt gacagatgag cgggaacgga aggcctctgga 2100
gggcattatc agcaactttg ggcagactcc ctgtcagctg ctgaaggagc 2150
cacatcaaac tcggctctca gctgaggaa gagcccatcg ccttgacgc 2200
ctggacacta actcacctag catcttccag caoctggacg aactcaaggc 2250
attcttcgca gaggtgactg tgagtgccag tgggtctgtg ggcacccaca 2300
gctggttgcc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350
gacccaccca tgggcagcca caagacgcag cgactgctga ttggccctgt 2400
ggtgccagcg agtgggtgtga ttggacaagc actggcagtg gccccgggat 2450
gaaagctgct attcagcggg gccactggg atggcagcct gcgggtgact 2500
gcactacccc gtggcaagct gttgagccag ctcagctgcc accttgatgt 2550
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ccggggacac cacgtgcatt ggtgtggcgc tcctgcatca ggggtgtctg 2650
tcagtaggcc tggcaccaaa gcctgtgcag gtcctgtatg ggcatggggc 2700
tgcatgtgag tgtgtggcca tcagcactga acttgacatg gctgtgtctg 2750
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gtagcggcac tacggcctct ggtgtccaca ttccctggac ctatcttcca 2850
cctgacattg gggtccgaag gccagattgt ggtacagagc tcagcgtggg 2900
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ccgggagggc ccgcccagaa gtccggcgga acaccccggg gtgggcagcc 3400
caggggggtg gcggggccca ccctgccag ctcagggatt ggcggggcat 3450

gttaccacct cagggattgg cgggcggaag tcccggccct cgccggctga 3500

ggggccgccc tgagggccag cactggcgtc t 3531

<210> 33

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 33

Met	Ser	Gln	Phe	Glu	Met	Asp	Thr	Tyr	Ala	Lys	Ser	His	Asp	Leu
1				5					10					15
Met	Ser	Gly	Phe	Trp	Asn	Ala	Cys	Tyr	Asp	Met	Leu	Met	Ser	Ser
				20					25					30
Gly	Gln	Arg	Arg	Gln	Trp	Glu	Arg	Ala	Gln	Ser	Arg	Arg	Ala	Phe
				35					40					45
Gln	Glu	Leu	Val	Leu	Glu	Pro	Ala	Gln	Arg	Arg	Ala	Arg	Leu	Glu
				50					55					60
Gly	Leu	Arg	Tyr	Thr	Ala	Val	Leu	Lys	Gln	Gln	Ala	Thr	Gln	His
				65					70					75
Ser	Met	Ala	Leu	Leu	His	Trp	Gly	Ala	Leu	Trp	Arg	Gln	Leu	Ala
				80					85					90
Ser	Pro	Cys	Gly	Ala	Trp	Ala	Leu	Arg	Asp	Thr	Pro	Ile	Pro	Arg
				95					100					105
Trp	Lys	Leu	Ser	Ser	Ala	Glu	Thr	Tyr	Ser	Arg	Met	Arg	Leu	Lys
				110					115					120
Leu	Val	Pro	Asn	His	His	Phe	Asp	Pro	His	Leu	Glu	Ala	Ser	Ala
				125					130					135
Leu	Arg	Asp	Asn	Leu	Gly	Glu	Val	Pro	Leu	Thr	Pro	Thr	Glu	Glu
				140					145					150
Ala	Ser	Leu	Pro	Leu	Ala	Val	Thr	Lys	Glu	Ala	Lys	Val	Ser	Thr
				155					160					165
Pro	Pro	Glu	Leu	Leu	Gln	Glu	Asp	Gln	Leu	Gly	Glu	Asp	Glu	Leu
				170					175					180
Ala	Glu	Leu	Glu	Thr	Pro	Met	Glu	Ala	Ala	Glu	Leu	Asp	Glu	Gln
				185					190					195
Arg	Glu	Lys	Leu	Val	Leu	Ser	Ala	Glu	Cys	Gln	Leu	Val	Thr	Val
				200					205					210
Val	Ala	Val	Val	Pro	Gly	Leu	Leu	Glu	Val	Thr	Thr	Gln	Asn	Val
				215					220					225
Tyr	Phe	Tyr	Asp	Gly	Ser	Thr	Glu	Arg	Val	Glu	Thr	Glu	Glu	Gly
				230					235					240
Ile	Gly	Tyr	Asp	Phe	Arg	Arg	Pro	Leu	Ala	Gln	Leu	Arg	Glu	Val
				245					250					255
His	Leu	Arg	Arg	Phe	Asn	Leu	Arg	Arg	Ser	Ala	Leu	Glu	Leu	Phe
				260					265					270

Phe Ile Asp Gln	Ala Asn Tyr Phe Leu	Asn Phe Pro Cys Lys Val	275	280	285
Gly Thr Thr Pro	Val Ser Ser Pro Ser	Gln Thr Pro Arg Pro Gln	290	295	300
Pro Gly Pro Ile	Pro Pro His Thr Gln	Val Arg Asn Gln Val Tyr	305	310	315
Ser Trp Leu Leu	Arg Leu Arg Pro Pro	Ser Gln Gly Tyr Leu Ser	320	325	330
Ser Arg Ser Pro	Gln Glu Met Leu Arg	Ala Ser Gly Leu Thr Gln	335	340	345
Lys Trp Val Gln	Arg Glu Ile Ser Asn	Phe Glu Tyr Leu Met Gln	350	355	360
Leu Asn Thr Ile	Ala Gly Arg Thr Tyr	Asn Asp Leu Ser Gln Tyr	365	370	375
Pro Val Phe Pro	Trp Val Leu Gln Asp	Tyr Val Ser Pro Thr Leu	380	385	390
Asp Leu Ser Asn	Pro Ala Val Phe Arg	Asp Leu Ser Lys Pro Ile	395	400	405
Gly Val Val Asn	Pro Lys His Ala Gln	Leu Val Arg Glu Lys Tyr	410	415	420
Glu Ser Phe Glu	Asp Pro Ala Gly Thr	Ile Asp Lys Phe His Tyr	425	430	435
Gly Thr His Tyr	Ser Asn Ala Ala Gly	Val Met His Tyr Leu Ile	440	445	450
Arg Val Glu Pro	Phe Thr Ser Leu His	Val Gln Leu Gln Ser Gly	455	460	465
Arg Phe Asp Cys	Ser Asp Arg Gln Phe	His Ser Val Ala Ala Ala	470	475	480
Trp Gln Ala Arg	Leu Glu Ser Pro Ala	Asp Val Lys Glu Leu Ile	485	490	495
Pro Glu Phe Phe	Tyr Phe Pro Asp Phe	Leu Glu Asn Gln Asn Gly	500	505	510
Phe Asp Leu Gly	Cys Leu Gln Leu Thr	Asn Glu Lys Val Gly Asp	515	520	525
Val Val Leu Pro	Pro Trp Ala Ser Ser	Pro Glu Asp Phe Ile Gln	530	535	540
Gln His Arg Gln	Ala Leu Glu Ser Glu	Tyr Val Ser Ala His Leu	545	550	555
His Glu Trp Ile	Asp Leu Ile Phe Gly	Tyr Lys Gln Arg Gly Pro	560	565	570
Ala Ala Glu Glu	Ala Leu Asn Val Phe	Tyr Tyr Cys Thr Tyr Glu	575	580	585

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	590	595	600
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	605	610	615
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	620	625	630
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	635	640	645
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	650	655	660
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	665	670	675
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	680	685	690
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	695	700	705
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	710	715	720
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	725	730	735
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	740	745	750
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	755	760	765
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	770	775	780
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	785	790	795
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	800	805	810
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	815	820	825
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	830	835	840
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	845	850	855
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	860	865	870
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	875	880	885
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	890	895	900

Ala Leu Thr Val Thr Glu Asp Phe Val Leu Leu Gly Thr Ala Gln
905 910 915

Cys Ala Leu His Ile Leu Gln Leu Asn Thr Leu Leu Pro Ala Ala
920 925 930

Pro Pro Leu Pro Met Lys Val Ala Ile Arg Ser Val Ala Val Thr
935 940 945

Lys Glu Arg Ser His Val Leu Val Gly Leu Glu Asp Gly Lys Leu
950 955 960

Ile Val Val Val Ala Gly Gln Pro Ser Glu Val Arg Ser Ser Gln
965 970 975

Phe Ala Arg Lys Leu Trp Arg Ser Ser Arg Arg Ile Ser Gln Val
980 985 990

Ser Ser Gly Glu Thr Glu Tyr Asn Pro Thr Glu Ala Arg
995 1000

<210> 34
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 34
tgactgcact accccgtggc aagctgttga gccagctcag ctg 43

<210> 35
<211> 1395
<212> DNA
<213> Homo sapiens

<400> 35
cggacgcgtg ggcgacgcg tgggggctgt gagaaagtgc caataaatac 50
atcatgcaac cccacggccc accttgtgaa ctccctcgtg ccagggtga 100
tgtgcgtctt ccagggtac tcatccaaag gcctaatacca acgttctgtc 150
ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200
ggtactggcc ctgggccaat gcgtcctcgc tggagccttt gctcctctct 250
actgggcctt ccacaagccc caggacatcc ctacottccc cttaatctct 300
gccttcaccc gcacactccg ttaccacact gggtcattgg catttgagc 350
cctcatcctg acccttgtgc agatagcccg ggttatcttg gagtatttg 400
accacaagct cagaggagtg cagaaccctg tagcccgctg catcatgtgc 450
tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
ccgcaatgca tacatcatga tcgccatcta cggaagaat ttctgtgtct 550
cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtgtgc 600
gtcctggaca aagtcacaga cctgctgctg ttctttggga agctgctggt 650

ggtcggaggg gtgggggtcc tgtccttctt tttttctcc ggtcgcaccc 700
 cggggctggg taaagacttt aagagccccc acctcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcacgcga cggccttctt 800
 cagcgttttc ggcatgtgtg tggacacgct ctctctctgc ttcttggaag 850
 acctggagcg gaacaacggc tccttggaac ggccctacta catgtccaag 900
 agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950
 gaagaggaag aagtgacagc tccggccctg atccaggact goaccccacc 1000
 cccaccgtcc agccatccaa cctcacttog ccttacaggt ctccattttg 1050
 tggtaaaaaa aggttttagg ccaggcgccg tggtcacgc ctgtaatcca 1100
 acactttgag aggctgaggg gggcggatca cctgagtcag gagtctgaga 1150
 ccagcctggc caacatggtg aaacctcgt ctctattaaa aatacaaaaa 1200
 ttatgcgaga gtggtggcat gcacctgtca tcccagctac tcgggaggct 1250
 gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300
 gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350
 aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

<210> 36

<211> 321

<212> PRT

<213> Homo sapiens

<400> 36

Arg	Thr	Arg	Gly	Arg	Thr	Arg	Gly	Gly	Cys	Glu	Lys	Val	Pro	Ile
1				5					10					15
Asn	Thr	Ser	Cys	Asn	Pro	Thr	Ala	His	Leu	Val	Asn	Ser	Ser	Cys
				20					25					30
Pro	Gly	Leu	Met	Cys	Val	Phe	Gln	Gly	Tyr	Ser	Ser	Lys	Gly	Leu
				35					40					45
Ile	Gln	Arg	Ser	Val	Phe	Asn	Leu	Gln	Ile	Tyr	Gly	Val	Leu	Gly
				50					55					60
Leu	Phe	Trp	Thr	Leu	Asn	Trp	Val	Leu	Ala	Leu	Gly	Gln	Cys	Val
				65					70					75
Leu	Ala	Gly	Ala	Phe	Ala	Ser	Phe	Tyr	Trp	Ala	Phe	His	Lys	Pro
				80					85					90
Gln	Asp	Ile	Pro	Thr	Phe	Pro	Leu	Ile	Ser	Ala	Phe	Ile	Arg	Thr
				95					100					105
Leu	Arg	Tyr	His	Thr	Gly	Ser	Leu	Ala	Phe	Gly	Ala	Leu	Ile	Leu
				110					115					120
Thr	Leu	Val	Gln	Ile	Ala	Arg	Val	Ile	Leu	Glu	Tyr	Ile	Asp	His
				125					130					135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys
				140					145					150
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe
				155					160					165
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn
				170					175					180
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn
				185					190					195
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu
				200					205					210
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser
				215					220					225
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe
				230					235					240
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser
				245					250					255
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe
				260					265					270
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu
				275					280					285
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys
				290					295					300
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp
				305					310					315
Asn	Lys	Lys	Arg	Lys	Lys									
				320										

<210> 37

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 37

tcgtgccag gggctgatgt gc 22

<210> 38

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 38

gtctttacc agcccgga tgcg 24

<210> 39

<211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaattcc aacgtttctgt cttcaatctg caaatctatg gggctcctggg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 40
gagtccttgac cgccgcgagg ctcttggtac ctcagcgaga ggcgcaggcg 50
tccggcgccc gtggctatgt tcgtgtccga ttccgcgaaa gagttctacg 100
agggtgtcca gagccagagg gtccctctct tcgtggcctc ggacgtggat 150
gtctgtgtgt cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
gcaatatacg ctggttccag ttctcgggtg gcaagaactt gaaactgcgt 250
ttcttgagca taaagaacag ttctcattatt ttatttctcat aaactgtgga 300
gctaatttag acctattgga tattcttcaa cctgatgaag acatatatt 350
ctttgtgtgt gactcccata ggcagtgcaa tgcgtgcaat gtatacaacg 400
atacccgatg caaattactc attaacaacg atgatgacct tgaagttccc 450
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
aaatgacagt gatgggtcag agccttctga gaagcgacac cgggttagaag 550
aggagatagt ggagcaaacc atgcggagga ggcagcgccg agagtgggag 600
gcccggagaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650
gacatcgtca gccatggtga tgtttgagct ggcttggatg ctgtccaagg 700
acctgaatga catgctgtgg tgggccatcg ttggactaac agaccagtgg 750
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800
gcagcgccac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850
cactctccgt ggactgcaca cggatctcct ttgagtatga cctccgctcg 900
gtgctctacc agcaetggtc cctccatgac agcctgtgca acaccagcta 950
taccgcagcc aggttcaagc tgtggtctgt gcattggacg aagcggtctc 1000
aggagttcct tcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
ttccaggcca tggacatctc ctggaaggag aatttgccgg aaatgattga 1100
agagtctgca aataaatttg ggaatgaagga catgcgctg cagactttca 1150
gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250
 tcacttcate caggctcttg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccaaagaagc agctgcgagc caccacgag 1350
 accattgccca gctgc 1365

<210> 41

<211> 566

<212> PRT

<213> Homo sapiens

<400> 41

Met	Phe	Val	Ser	Asp	Phe	Arg	Lys	Glu	Phe	Tyr	Glu	Val	Val	Gln	1	5	10	15
Ser	Gln	Arg	Val	Leu	Leu	Phe	Val	Ala	Ser	Asp	Val	Asp	Ala	Leu	20	25	30	35
Cys	Ala	Cys	Lys	Ile	Leu	Gln	Ala	Leu	Phe	Gln	Cys	Asp	His	Val	35	40	45	50
Gln	Tyr	Thr	Leu	Val	Pro	Val	Ser	Gly	Trp	Gln	Glu	Leu	Glu	Thr	50	55	60	65
Ala	Phe	Leu	Glu	His	Lys	Glu	Gln	Phe	His	Tyr	Phe	Ile	Leu	Ile	65	70	75	80
Asn	Cys	Gly	Ala	Asn	Val	Asp	Leu	Leu	Asp	Ile	Leu	Gln	Pro	Asp	80	85	90	95
Glu	Asp	Thr	Ile	Phe	Phe	Val	Cys	Asp	Ser	His	Arg	Pro	Val	Asn	95	100	105	110
Val	Val	Asn	Val	Tyr	Asn	Asp	Thr	Gln	Ile	Lys	Leu	Leu	Ile	Lys	110	115	120	125
Gln	Asp	Asp	Asp	Leu	Glu	Val	Pro	Ala	Tyr	Glu	Asp	Ile	Phe	Arg	125	130	135	140
Asp	Glu	Glu	Glu	Asp	Glu	Glu	His	Ser	Gly	Asn	Asp	Ser	Asp	Gly	140	145	150	155
Ser	Glu	Pro	Ser	Glu	Lys	Arg	Thr	Arg	Leu	Glu	Glu	Glu	Ile	Val	155	160	165	170
Glu	Gln	Thr	Met	Arg	Arg	Arg	Gln	Arg	Arg	Glu	Trp	Glu	Ala	Arg	170	175	180	185
Arg	Arg	Asp	Ile	Leu	Phe	Asp	Tyr	Glu	Gln	Tyr	Glu	Tyr	His	Gly	185	190	195	200
Thr	Ser	Ser	Ala	Met	Val	Met	Phe	Glu	Leu	Ala	Trp	Met	Leu	Ser	200	205	210	215
Lys	Asp	Leu	Asn	Asp	Met	Leu	Trp	Trp	Ala	Ile	Val	Gly	Leu	Thr	215	220	225	230
Asp	Gln	Trp	Val	Gln	Asp	Lys	Ile	Thr	Gln	Met	Lys	Tyr	Val	Thr	230	235	240	245
Asp	Val	Gly	Val	Leu	Gln	Arg	His	Val	Ser	Arg	His	Asn	His	Arg	245	250	255	260

245	250	255
Asn Glu Asp Glu	Glu Asn Thr Leu Ser	Val Asp Cys Thr Arg Ile
260	265	270
Ser Phe Glu Tyr	Asp Leu Arg Leu Val	Leu Tyr Gln His Trp Ser
275	280	285
Leu His Asp Ser	Leu Cys Asn Thr Ser	Tyr Thr Ala Ala Arg Phe
290	295	300
Lys Leu Trp Ser	Val His Gly Gln Lys	Arg Leu Gln Glu Phe Leu
305	310	315
Ala Asp Met Gly	Leu Pro Leu Lys Gln	Val Lys Gln Lys Phe Gln
320	325	330
Ala Met Asp Ile	Ser Leu Lys Glu Asn	Leu Arg Glu Met Ile Glu
335	340	345
Glu Ser Ala Asn	Lys Phe Gly Met Lys	Asp Met Arg Val Gln Thr
350	355	360
Phe Ser Ile His	Phe Gly Phe Lys His	Lys Phe Leu Ala Ser Asp
365	370	375
Val Val Phe Ala	Thr Met Ser Leu Met	Glu Ser Pro Glu Lys Asp
380	385	390
Gly Ser Gly Thr	Asp His Phe Ile Gln	Ala Leu Asp Ser Leu Ser
395	400	405
Arg Ser Asn Leu	Asp Lys Leu Tyr His	Gly Leu Glu Leu Ala Lys
410	415	420
Lys Gln Leu Arg	Ala Thr Gln Gln Thr	Ile Ala Ser Cys Leu Cys
425	430	435
Thr Asn Leu Val	Ile Ser Gln Gly Pro	Phe Leu Tyr Cys Ser Leu
440	445	450
Met Glu Gly Thr	Pro Asp Val Met Leu	Phe Ser Arg Pro Ala Ser
455	460	465
Leu Ser Leu Leu	Ser Lys His Leu Leu	Lys Ser Phe Val Cys Ser
470	475	480
Thr Lys Asn Arg	Arg Cys Lys Leu Leu	Pro Leu Val Met Ala Ala
485	490	495
Pro Leu Ser Met	Glu His Gly Thr Val	Thr Val Val Gly Ile Pro
500	505	510
Pro Glu Thr Asp	Ser Ser Asp Arg Lys	Asn Phe Phe Gly Arg Ala
515	520	525
Phe Glu Lys Ala	Ala Glu Ser Thr Ser	Ser Arg Met Leu His Asn
530	535	540
His Phe Asp Leu	Ser Val Ile Glu Leu	Lys Ala Glu Asp Arg Ser
545	550	555
Lys Phe Leu Asp	Ala Leu Ile Ser Leu Leu Ser	

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
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 ctcttcgtgg cctcggangt ggatgctctg tgtgcgtgca agatccttca 150
 ggccttggtc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200
 ggtggcaaga acttgaaact gcatttcttg agcataaaga acagtttcat 250
 tattttattc tcataaactg tggagctaat gtgacacctat tggatattct 300
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<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttccgcaaag agttctacga ggtgg 25

<210> 44
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 <212> DNA
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<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgta 50

<210> 46

<211> 3089
 <212> DNA
 <213> Homo sapiens

<400> 46
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 aggaacgaaa agagacagtt tttttggaa agctaagtct tccctttatc 200
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taaagaatgc tgtctcctct tggaaaaaaa aaaaaaaa 3089

<210> 47

<211> 259

<212> PRT

<213> Homo sapiens

<220>

<221> Signal Peptide

<222> 1-20

<223> Signal Peptide

<220>

<221> N-glycosylation Site

<222> 72-75

<223> N-glycosylation Site

<220>

<221> Clq Domain Proteins

<222> 144-178, 78-111, 84-117

<223> Clq Domain Proteins

<400> 47

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			20						25					30
Arg	Ala	Val	Ala	Ser	Gly	Cys	Gln	Arg	Cys	Cys	Asp	Ser	Glu	Asp
			35						40					45
Pro	Leu	Asp	Pro	Ala	His	Val	Ser	Ser	Ala	Ser	Ser	Ser	Gly	Arg
			50						55					60
Pro	His	Ala	Leu	Pro	Glu	Ile	Arg	Pro	Tyr	Ile	Asn	Ile	Thr	Ile
			65						70					75
Leu	Lys	Gly	Asp	Lys	Gly	Asp	Pro	Gly	Pro	Met	Gly	Leu	Pro	Gly
			80						85					90
Tyr	Met	Gly	Arg	Glu	Gly	Pro	Gln	Gly	Glu	Pro	Gly	Pro	Gln	Gly
			95						100					105
Ser	Lys	Gly	Asp	Lys	Gly	Glu	Met	Gly	Ser	Pro	Gly	Ala	Pro	Cys
			110						115					120
Gln	Lys	Arg	Phe	Phe	Ala	Phe	Ser	Val	Gly	Arg	Lys	Thr	Ala	Leu
			125						130					135
His	Ser	Gly	Glu	Asp	Phe	Gln	Thr	Leu	Leu	Phe	Glu	Arg	Val	Phe
			140						145					150
Val	Asn	Leu	Asp	Gly	Cys	Phe	Asp	Met	Ala	Thr	Gly	Gln	Phe	Ala
			155						160					165
Ala	Pro	Leu	Arg	Gly	Ile	Tyr	Phe	Phe	Ser	Leu	Asn	Val	His	Ser
			170						175					180
Trp	Asn	Tyr	Lys	Glu	Thr	Tyr	Val	His	Ile	Met	His	Asn	Gln	Lys
			185						190					195
Glu	Ala	Val	Ile	Leu	Tyr	Ala	Gln	Pro	Ser	Glu	Arg	Ser	Ile	Met

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Gln Ser Gln Ser	Val Met Leu Asp Leu	Ala Tyr Gly Asp Arg Val			
	215		220		225
Trp Val Arg Leu	Phe Lys Arg Gln Arg	Glu Asn Ala Ile Tyr Ser			
	230		235		240
Asn Asp Phe Asp	Thr Tyr Ile Thr Phe	Ser Gly His Leu Ile Lys			
	245		250		255
Ala Glu Asp Asp					

<210> 48
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48
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<210> 49
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 49
 ggtccccgta ggccagggtcc agc 23

<210> 50
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 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 50
 ctactcttc agcctcaatg tgcacagctg gaattacaag gagagctacg 50

<210> 51
 <211> 2768
 <212> DNA
 <213> Homo sapiens

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 ccgctctccg ggacagaaga tgtgtccag ggctcctctg ctgtgcgcgc 150
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 aaaagatgaa gtgtgaaa 2768

<210> 52
 <211> 673
 <212> PRT
 <213> Homo sapiens

<400> 52
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 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

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Asp Leu Thr Ala	Asn Arg Leu His Glu	Ile Thr Asn Glu Thr Phe	
	110	115	120
Arg Gly Leu Arg	Arg Leu Glu Arg Leu Tyr	Leu Gly Lys Asn Arg	
	125	130	135
Ile Arg His Ile	Gln Pro Gly Ala Phe Asp	Thr Leu Asp Arg Leu	
	140	145	150
Leu Glu Leu Lys	Leu Gln Asp Asn Glu Leu	Arg Ala Leu Pro Pro	
	155	160	165
Leu Arg Leu Pro	Arg Leu Leu Leu Leu Asp	Leu Ser His Asn Ser	
	170	175	180
Leu Leu Ala Leu	Glu Pro Gly Ile Leu Asp	Thr Ala Asn Val Glu	
	185	190	195
Ala Leu Arg Leu	Ala Gly Leu Gly Leu Gln	Gln Leu Asp Glu Gly	
	200	205	210
Leu Phe Ser Arg	Leu Arg Asn Leu His Asp	Leu Asp Val Ser Asp	
	215	220	225
Asn Gln Leu Glu	Arg Val Pro Pro Val Ile	Arg Gly Leu Arg Gly	
	230	235	240
Leu Thr Arg Leu	Arg Leu Ala Gly Asn Thr	Arg Ile Ala Gln Leu	
	245	250	255
Arg Pro Glu Asp	Leu Ala Gly Leu Ala Ala	Leu Gln Glu Leu Asp	
	260	265	270
Val Ser Asn Leu	Ser Leu Gln Ala Leu Pro	Gly Asp Leu Ser Gly	
	275	280	285
Leu Phe Pro Arg	Leu Arg Leu Leu Ala Ala	Ala Arg Asn Pro Phe	
	290	295	300
Asn Cys Val Cys	Pro Leu Ser Trp Phe Gly	Pro Trp Val Arg Glu	
	305	310	315
Ser His Val Thr	Leu Ala Ser Pro Glu Glu	Thr Arg Cys His Phe	
	320	325	330
Pro Pro Lys Asn	Ala Gly Arg Leu Leu Leu	Glu Leu Asp Tyr Ala	
	335	340	345
Asp Phe Gly Cys	Pro Ala Thr Thr Thr Thr	Ala Thr Val Pro Thr	
	350	355	360
Thr Arg Pro Val	Val Arg Glu Pro Thr Ala	Leu Ser Ser Ser Leu	
	365	370	375
Ala Pro Thr Trp	Leu Ser Pro Thr Ala Pro	Ala Thr Glu Ala Pro	
	380	385	390
Ser Pro Pro Ser	Thr Ala Pro Pro Thr Val	Gly Pro Val Pro Gln	
	395	400	405
Pro Gln Asp Cys	Pro Pro Ser Thr Cys Leu	Asn Gly Gly Thr Cys	

410	415	420
His Leu Gly Thr	Arg His His Leu Ala	Cys Leu Cys Pro Glu Gly
425	430	435
Phe Thr Gly Leu	Tyr Cys Glu Ser Gln Met	Gly Gln Gly Thr Arg
440	445	450
Pro Ser Pro Thr	Pro Val Thr Pro Arg Pro	Pro Arg Ser Leu Thr
455	460	465
Leu Gly Ile Glu	Pro Val Ser Pro Thr Ser	Leu Arg Val Gly Leu
470	475	480
Gln Arg Tyr Leu	Gln Gly Ser Ser Val Gln	Leu Arg Ser Leu Arg
485	490	495
Leu Thr Tyr Arg	Asn Leu Ser Gly Pro Asp	Lys Arg Leu Val Thr
500	505	510
Leu Arg Leu Pro	Ala Ser Leu Ala Glu Tyr	Thr Val Thr Gln Leu
515	520	525
Arg Pro Asn Ala	Thr Tyr Ser Val Cys Val	Met Pro Leu Gly Pro
530	535	540
Gly Arg Val Pro	Glu Gly Glu Glu Ala Cys	Gly Glu Ala His Thr
545	550	555
Pro Pro Ala Val	His Ser Asn His Ala Pro	Val Thr Gln Ala Arg
560	565	570
Glu Gly Asn Leu	Pro Leu Leu Ile Ala Pro	Ala Leu Ala Ala Val
575	580	585
Leu Leu Ala Ala	Leu Ala Ala Val Gly Ala	Ala Tyr Cys Val Arg
590	595	600
Arg Gly Arg Ala	Met Ala Ala Ala Ala Gln	Asp Lys Gly Gln Val
605	610	615
Gly Pro Gly Ala	Gly Pro Leu Glu Leu Glu	Gly Val Lys Val Pro
620	625	630
Leu Glu Pro Gly	Pro Lys Ala Thr Glu Gly	Gly Gly Glu Ala Leu
635	640	645
Pro Ser Gly Ser	Glu Cys Glu Val Pro Leu	Met Gly Phe Pro Gly
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Pro Gly Leu Gln	Ser Pro Leu His Ala Lys	Pro Tyr Ile
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<210> 53

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

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<210> 54
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<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 54
ttgctcacat ccagctcctg cagg 24

<210> 55
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 55
tgatgttgt ccagacaacc agctggagct gtatccgagg c 41

<210> 56
<211> 3462
<212> DNA
<213> Homo sapiens

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<210> 57

<211> 811

<212> PRT

<213> Homo sapiens

<400> 57

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				20					25					30
Met	Thr	Asn	Cys	Ser	Asn	Met	Ser	Leu	Arg	Lys	Val	Pro	Ala	Asp
				35					40					45
Leu	Thr	Pro	Ala	Thr	Thr	Thr	Leu	Asp	Leu	Ser	Tyr	Asn	Leu	Leu
				50					55					60
Phe	Gln	Leu	Gln	Ser	Ser	Asp	Phe	His	Ser	Val	Ser	Lys	Leu	Arg
				65					70					75
Val	Leu	Ile	Leu	Cys	His	Asn	Arg	Ile	Gln	Gln	Leu	Asp	Leu	Lys
				80					85					90

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	95	105
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	110	120
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	125	135
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	140	150
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	155	165
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	170	180
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	185	195
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	200	210
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	215	225
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	230	240
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	245	255
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	260	270
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	275	285
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	290	300
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	305	315
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	320	330
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	335	345
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	350	360
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	365	375
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	380	390
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	395	405

Gln Asn Leu Leu	Gln His Lys Asn Asp	Glu Asn Cys Ser Trp	Pro
410		415	420
Glu Thr Val Val	Asn Met Asn Leu Ser	Tyr Asn Lys Leu Ser	Asp
425		430	435
Ser Val Phe Arg	Cys Leu Pro Lys Ser	Ile Gln Ile Leu Asp	Leu
440		445	450
Asn Asn Asn Gln	Ile Gln Thr Val Pro	Lys Glu Thr Ile His	Leu
455		460	465
Met Ala Leu Arg	Glu Leu Asn Ile Ala	Phe Asn Phe Leu Thr	Asp
470		475	480
Leu Pro Gly Cys	Ser His Phe Ser Arg	Leu Ser Val Leu Asn	Ile
485		490	495
Glu Met Asn Phe	Ile Leu Ser Pro Ser	Leu Asp Phe Val Gln	Ser
500		505	510
Cys Gln Glu Val	Lys Thr Leu Asn Ala	Gly Arg Asn Pro Phe	Arg
515		520	525
Cys Thr Cys Glu	Leu Lys Asn Phe Ile	Gln Leu Glu Thr Tyr	Ser
530		535	540
Glu Val Met Met	Val Gly Trp Ser Asp	Ser Tyr Thr Cys Glu	Tyr
545		550	555
Pro Leu Asn Leu	Arg Gly Thr Arg Leu	Lys Asp Val His Leu	His
560		565	570
Glu Leu Ser Cys	Asn Thr Ala Leu Leu	Ile Val Thr Ile Val	Val
575		580	585
Ile Met Leu Val	Leu Gly Leu Ala Val	Ala Phe Cys Cys Leu	His
590		595	600
Phe Asp Leu Pro	Trp Tyr Leu Arg Met	Leu Gly Gln Cys Thr	Gln
605		610	615
Thr Trp His Arg	Val Arg Lys Thr Thr	Gln Glu Gln Leu Lys	Arg
620		625	630
Asn Val Arg Phe	His Ala Phe Ile Ser	Tyr Ser Glu His Asp	Ser
635		640	645
Leu Trp Val Lys	Asn Glu Leu Ile Pro	Asn Leu Glu Lys Glu	Asp
650		655	660
Gly Ser Ile Leu	Ile Cys Leu Tyr Glu	Ser Tyr Phe Asp Pro	Gly
665		670	675
Lys Ser Ile Ser	Glu Asn Ile Val Ser	Phe Ile Glu Lys Ser	Tyr
680		685	690
Lys Ser Ile Phe	Val Leu Ser Pro Asn	Phe Val Gln Asn Glu	Trp
695		700	705
Cys His Tyr Glu	Phe Tyr Phe Ala His	His Asn Leu Phe His	Glu
710		715	720

Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
				725						730				735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740						745				750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755						760				765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770						775				780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
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Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys
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Leu

<210> 58

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 58

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<210> 59

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 59

ttatagacaa tctgttctca tcagaga 27

<210> 60

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 60

aaaaagcata cttggaatgg cccaaggata ggtgtaaagt 40

<210> 61

<211> 3772

<212> DNA

<213> Homo sapiens

<400> 61

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<210> 62

<211> 756

<212> PRT

<213> Homo sapiens

<400> 62

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Leu	Ala	Val	Thr	Leu	Ala	Gly	Val	Gly	Ala	Gln	Gly	Ala	Ala	Leu	
				20					25					30	
Glu	Asp	Pro	Asp	Tyr	Tyr	Gly	Gln	Glu	Ile	Trp	Ser	Arg	Glu	Pro	
				35					40					45	
Tyr	Tyr	Ala	Arg	Pro	Glu	Pro	Glu	Leu	Glu	Thr	Phe	Ser	Pro	Pro	
				50					55					60	
Leu	Pro	Ala	Gly	Pro	Gly	Glu	Glu	Trp	Glu	Arg	Arg	Pro	Gln	Glu	
				65					70					75	
Pro	Arg	Pro	Pro	Lys	Arg	Ala	Thr	Lys	Pro	Lys	Lys	Ala	Pro	Lys	
				80					85					90	
Arg	Glu	Lys	Ser	Ala	Pro	Glu	Pro	Pro	Pro	Pro	Gly	Lys	His	Ser	
				95					100					105	
Asn	Lys	Lys	Val	Met	Arg	Thr	Lys	Ser	Ser	Glu	Lys	Ala	Ala	Asn	
				110					115					120	
Asp	Asp	His	Ser	Val	Arg	Val	Ala	Arg	Glu	Asp	Val	Arg	Glu	Ser	
				125					130					135	
Cys	Pro	Pro	Leu	Gly	Leu	Glu	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gln	
				140					145					150	
Leu	His	Ala	Ser	Thr	Val	Lys	Arg	Tyr	Gly	Leu	Gly	Ala	His	Arg	
				155					160					165	
Gly	Arg	Leu	Asn	Ile	Gln	Ala	Gly	Ile	Asn	Glu	Asn	Asp	Phe	Tyr	
				170					175					180	
Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln	Gln	Trp	Ile	

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Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg		Phe	Thr	Gly	Val	Ile	Thr														
				200						205																			
Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr															
				215					220																				
Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys															
				230					235																				
Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu															
				245					250																				
Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg	Tyr															
				260					265																				
Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys															
				275					280																				
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn															
				290					295																				
Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp															
				305					310																				
Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val															
				320					325																				
Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly															
				335					340																				
Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp															
				350					355																				
His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile															
				365					370																				
Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Leu															
				380					385																				
Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	Ala															
				395					400																				
Arg	Ile	Val	His	Leu	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro															
				410					415																				
Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser															
				425					430																				
Glu	Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile															
				440					445																				
Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu															
				455					460																				
Ala	Glu	Asp	Arg	Gln	Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr															
				470					475																				
Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser	Glu	Asn	Ala	Thr	Val	Ala															
				485					490																				
Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe															

500										505										510																																					
Val	Leu	Gly	Gly	Asn	Leu	Gln	Gly	Gly	Glu	Leu	Val	Val	Ala	Tyr						Val	Leu	Gly	Gly	Asn	Leu	Gln	Gly	Gly	Glu	Leu	Val	Val	Ala	Tyr					Val	Leu	Gly	Gly	Asn	Leu	Gln	Gly	Gly	Glu	Leu	Val	Val	Ala	Tyr				
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Pro	Tyr	Asp	Leu	Val	Arg	Ser	Pro	Trp	Lys	Thr	Gln	Glu	His	Thr						Pro	Tyr	Asp	Leu	Val	Arg	Ser	Pro	Trp	Lys	Thr	Gln	Glu	His	Thr				Pro	Tyr	Asp	Leu	Val	Arg	Ser	Pro	Trp	Lys	Thr	Gln	Glu	His	Thr					
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Ala	Ser	Thr	His	Arg	Leu	Met	Thr	Asp	Ala	Arg	Arg	Arg	Val	Cys						Ala	Ser	Thr	His	Arg	Leu	Met	Thr	Asp	Ala	Arg	Arg	Arg	Val	Cys				Ala	Ser	Thr	His	Arg	Leu	Met	Thr	Asp	Ala	Arg	Arg	Arg	Val	Cys					
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Ser	Trp	His	Thr	Val	Ala	Gly	Ser	Leu	Asn	Asp	Phe	Ser	Tyr	Leu						Ser	Trp	His	Thr	Val	Ala	Gly	Ser	Leu	Asn	Asp	Phe	Ser	Tyr	Leu				Ser	Trp	His	Thr	Val	Ala	Gly	Ser	Leu	Asn	Asp	Phe	Ser	Tyr	Leu					
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His	Thr	Asn	Cys	Phe	Glu	Leu	Ser	Ile	Tyr	Val	Gly	Cys	Asp	Lys						His	Thr	Asn	Cys	Phe	Glu	Leu	Ser	Ile	Tyr	Val	Gly	Cys	Asp	Lys				His	Thr	Asn	Cys	Phe	Glu	Leu	Ser	Ile	Tyr	Val	Gly	Cys	Asp	Lys					
				605																				610																	615																
Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg						Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg				Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg					
				620																				625																	630																
Glu	Ser	Leu	Ile	Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys						Glu	Ser	Leu	Ile	Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys				Glu	Ser	Leu	Ile	Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys					
				635																				640																	645																
Gly	Leu	Val	Arg	Asp	Ser	His	Gly	Lys	Gly	Ile	Pro	Asn	Ala	Ile						Gly	Leu	Val	Arg	Asp	Ser	His	Gly	Lys	Gly	Ile	Pro	Asn	Ala	Ile				Gly	Leu	Val	Arg	Asp	Ser	His	Gly	Lys	Gly	Ile	Pro	Asn	Ala	Ile					
				650																				655																	660																
Ile	Ser	Val	Glu	Gly	Ile	Asn	His	Asp	Ile	Arg	Thr	Ala	Asn	Asp						Ile	Ser	Val	Glu	Gly	Ile	Asn	His	Asp	Ile	Arg	Thr	Ala	Asn	Asp				Ile	Ser	Val	Glu	Gly	Ile	Asn	His	Asp	Ile	Arg	Thr	Ala	Asn	Asp					
				665																				670																	675																
Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr						Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr				Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr					
				680																				685																	690																
Ala	Lys	Ala	Glu	Gly	Phe	Thr	Ala	Ser	Thr	Lys	Asn	Cys	Met	Val						Ala	Lys	Ala	Glu	Gly	Phe	Thr	Ala	Ser	Thr	Lys	Asn	Cys	Met	Val				Ala	Lys	Ala	Glu	Gly	Phe	Thr	Ala	Ser	Thr	Lys	Asn	Cys	Met	Val					
				695																				700																	705																
Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	Asp	Phe	Thr	Leu	Ser	Lys						Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	Asp	Phe	Thr	Leu	Ser	Lys				Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	Asp	Phe	Thr	Leu	Ser	Lys					
				710																				715																	720																
Thr	Asn	Met	Ala	Arg	Ile	Arg	Glu	Ile	Met	Glu	Lys	Phe	Gly	Lys						Thr	Asn	Met	Ala	Arg	Ile	Arg	Glu	Ile	Met	Glu	Lys	Phe	Gly	Lys				Thr	Asn	Met	Ala	Arg	Ile	Arg	Glu	Ile	Met	Glu	Lys	Phe	Gly	Lys					
				725																				730																	735																
Gln	Pro	Val	Ser	Leu	Pro	Ala	Arg	Arg	Leu	Lys	Leu	Arg	Gly	Arg						Gln	Pro	Val	Ser	Leu	Pro	Ala	Arg	Arg	Leu	Lys	Leu	Arg	Gly	Arg				Gln	Pro	Val	Ser	Leu	Pro	Ala	Arg	Arg	Leu	Lys	Leu	Arg	Gly	Arg					
				740																				745																	750																
Lys	Arg	Arg	Gln	Arg	Gly															Lys	Arg	Arg	Gln	Arg	Gly													Lys	Arg	Arg	Gln	Arg	Gly														
				755																																																					

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gttctcaatg agctaccggt cccc 24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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<400> 64
cgcgatgtag tggaactcgg gctc 24

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<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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atccgcataa accctcagtc ctggttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

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cccagcccgg gcttcagctc tttcccaggt gttgactcca gctccagett 150
cagctccagc tcagggtcgg gctccagctc cagccgcagc ttaggcagcg 200
gagggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250
cgtgggacct gccagtgtc tgtttccctg ccagacacca cctttcccgt 300
ggacagagtg gaacgcttgg aattcacagc tcattgttctt tctcagaagt 350
ttgagaaaga actttctaaa gtgagggaat atgtccaatt aattagtgtg 400
tatgaaaaga aactgtttaa cctaactgtc cgaattgaca tcatggagaa 450
ggataccatt tcttacctg aactggactt cgagctgacg aaggtagaag 500
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 gcttctaacy ccttcatggt atgtgggggt ctgtatgcc cccgtactat 1350
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aaaa 2854

<210> 67
<211> 510
<212> PRT
<213> Homo sapiens

<400> 67
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20 25 30
Ser Pro Gly Phe Ser Ser Phe Pro Gly Val Asp Ser Ser Ser Ser
35 40 45
Phe Ser Ser Ser Ser Arg Ser Gly Ser Ser Ser Ser Arg Ser Leu
50 55 60
Gly Ser Gly Gly Ser Val Ser Gln Leu Phe Ser Asn Phe Thr Gly
65 70 75
Ser Val Asp Asp Arg Gly Thr Cys Gln Cys Ser Val Ser Leu Pro
80 85 90
Asp Thr Thr Phe Pro Val Asp Arg Val Glu Arg Leu Glu Phe Thr
95 100 105
Ala His Val Leu Ser Gln Lys Phe Glu Lys Glu Leu Ser Lys Val
110 115 120
Arg Glu Tyr Val Gln Leu Ile Ser Val Tyr Glu Lys Lys Leu Leu
125 130 135
Asn Leu Thr Val Arg Ile Asp Ile Met Glu Lys Asp Thr Ile Ser
140 145 150
Tyr Thr Glu Leu Asp Phe Glu Leu Ile Lys Val Glu Val Lys Glu
155 160 165
Met Glu Lys Leu Val Ile Gln Leu Lys Glu Ser Phe Gly Gly Ser
170 175 180
Ser Glu Ile Val Asp Gln Leu Glu Val Glu Ile Arg Asn Met Thr
185 190 195
Leu Leu Val Glu Lys Leu Glu Thr Leu Asp Lys Asn Asn Val Leu
200 205 210

Ala Ile Arg Arg	Glu Ile Val Ala Leu Lys Thr Lys Leu Lys Glu	215	220	225
Cys Glu Ala Ser	Lys Asp Gln Asn Thr Pro Val Val His Pro Pro	230	235	240
Pro Thr Pro Gly	Ser Cys Gly His Gly Gly Val Val Asn Ile Ser	245	250	255
Lys Pro Ser Val	Val Gln Leu Asn Trp Arg Gly Phe Ser Tyr Leu	260	265	270
Tyr Gly Ala Trp	Gly Arg Asp Tyr Ser Pro Gln His Pro Asn Lys	275	280	285
Gly Leu Tyr Trp	Val Ala Pro Leu Asn Thr Asp Gly Arg Leu Leu	290	295	300
Glu Tyr Tyr Arg	Leu Tyr Asn Thr Leu Asp Asp Leu Leu Leu Tyr	305	310	315
Ile Asn Ala Arg	Glu Leu Arg Ile Thr Tyr Gly Gln Gly Ser Gly	320	325	330
Thr Ala Val Tyr	Asn Asn Asn Met Tyr Val Asn Met Tyr Asn Thr	335	340	345
Gly Asn Ile Ala	Arg Val Asn Leu Thr Thr Asn Thr Ile Ala Val	350	355	360
Thr Gln Thr Leu	Pro Asn Ala Ala Tyr Asn Asn Arg Phe Ser Tyr	365	370	375
Ala Asn Val Ala	Trp Gln Asp Ile Asp Phe Ala Val Asp Glu Asn	380	385	390
Gly Leu Trp Val	Ile Tyr Ser Thr Glu Ala Ser Thr Gly Asn Met	395	400	405
Val Ile Ser Lys	Leu Asn Asp Thr Thr Leu Gln Val Leu Asn Thr	410	415	420
Trp Tyr Thr Lys	Gln Tyr Lys Pro Ser Ala Ser Asn Ala Phe Met	425	430	435
Val Cys Gly Val	Leu Tyr Ala Thr Arg Thr Met Asn Thr Arg Thr	440	445	450
Glu Glu Ile Phe	Tyr Tyr Asp Thr Thr Thr Gly Lys Glu Gly	455	460	465
Lys Leu Asp Ile	Val Met His Lys Met Gln Glu Lys Val Gln Ser	470	475	480
Ile Asn Tyr Asn	Pro Phe Asp Gln Lys Leu Tyr Val Tyr Asn Asp	485	490	495
Gly Tyr Leu Leu	Asn Tyr Asp Leu Ser Val Leu Gln Lys Pro Gln	500	505	510

<210> 68
 <211> 410
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

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cttatctata tgggtccttg ggtagggtt actctccca gcatccaaac 200

aaaggatgt attggnggc gccattgaat acagatggga gactgttgga 250

gtattataga ctgtacaacc cactggatga ttgtctattg tatataaatg 300

ctcgagagtt gcggatcacc tatggccaag gtagtgttac agcagtttac 350

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taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtgggc atgggtgtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctacctggc catagtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

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<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

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ccgtgttttg tatgccgatg ctgtcctagt ggaacaact ccactgtaac 200
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taatgttgat accaggaatg gaagaacaac tgaatagat tcttgattt 300
tgtgagaatg agaaaggtgt tgtccctgt aacattttg tggctataa 350
agctgtatat cgtttgtgct ttggtttggc tatgttctat cttcttctc 400
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cacaatggat ttgtgtctt taaatttgc gcagcaattg caattattat 500
tggggcattc ttcatccag aaggaaactt tacaactgtg tggttttatg 550
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<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

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				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
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Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Thr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr	
				290					295					300	
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala	
				305					310					315	
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr	
				320					325					330	
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr	
				335					340					345	
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg	
				350					355					360	
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val	
				365					370					375	
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His	
				380					385					390	
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr	
				395					400					405	
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp	
				410					415					420	
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val	
				425					430					435	
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg	
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Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
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 cgttgtggag atggggagcg tccctggggc tgtgtccat ggcgagctgg 100
 ataccatgtt tgtgtggaag tgccccgtgt ttgctatgcc gatctgtgcc 150
 tagtgaaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgagat atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaaag gtgttgtccc 300
 ttgtaacatt ttggttggt ataaagctgt atatcgtttg tgctttggtt 350
 tggctatgtt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgacacat ggattttggt tctttaaatt 450
tgctgcagca attgcaatta ttattggggc 480

<210> 75
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323
<223> unknown base

<400> 75
gttattgtga actttgtgga gatgggaggt ontggggctg tgttccatgg 50
cgagctggat accangtttg tgtggaagtg ccccggtttt gntatgccga 100
tgctgtccta gtggaacaa ntccactgta attagattga tntatgcact 150
ttntttgctt gttggagtan gtgtagcttg tgtaattgtg ataccaggaa 200
tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250
gttgctccct gtaacatttt ggttggtat aaagctgtat atngttttgtg 300
ctttggtttg gotangttct atnttcttct ctcttacta atgatacaag 350
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tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 48
<223> unknown base

<400> 76
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gtttgtgttg aagtgcocog tgtttgctat gccgatgctg toctagtggg 150
aacaactcca ctgtaactag attgatctat gcacttttct tgcctgtgtg 200
agtatgtgta gotttgttaa tgttgatacc aggaatggaa gaacaactga 250
ataagattcc tggattttgt gagaatgaga aaggtgttgt ccoctgtaac 300
attttggttg gotataaagc tgtatatcgt ttgtgctttg gtttggtat 350
gttctatctt ctctctctt tactaatgat caaagtgaag agtagcagtg 400
atccatagag tcagtgcac aatggatttt ggttctttaa atttgctgca 450
gcaattgcaa ttattattgg ggc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
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caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaaggtgtt gtccccttgt aacatttttg gttggctata aagctgtata 200
tcgtttgtgc tttggttttg ctatgttcta tctttctctc tctttactaa 250
tgatcaaatg gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350
cttcattcca gaaggaactt ttacaactgt gtgggtttat gtaggcattg 400
caggtgccct tttgttcctc ctcatacaac tagtcttact tattgatttt 450
gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaactc 500
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550
tgtcttttag tgctatcgtc ctgttctttg tctactacac tcctecagcc 600
agttgtttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
tggtgcttct gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgtttgtgt ggaagtgccg cg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgccca ccaactggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgtctg tctagtggga aacaactcca ctgtaactag attgatctat 50
gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
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cgcgaggctt tcggcaaagg cagtcgagtg ttgcagacc ggggcgagtc 150
ctgtgaaagc agataaaaga aaacatttat taacgtgtca ttacgagggg 200
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aaagaagatg ggccccccga gcctcgtgct gtggttgctg tccgcaactg 650
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 gaaaaa 3906

<210> 84

<211> 867

<212> PRT

<213> Homo sapiens

<400> 84

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Leu	Lys	Gly	Arg	Phe	Gln	Arg	Asp	Arg	Arg	Asn	Ile	Arg	Pro	Asn	35	40	45	
Ile	Ile	Leu	Val	Leu	Thr	Asp	Asp	Gln	Asp	Val	Glu	Leu	Gly	Ser	50	55	60	
Met	Gln	Val	Met	Asn	Lys	Thr	Arg	Arg	Ile	Met	Glu	Gln	Gly	Gly	65	70	75	
Ala	His	Phe	Ile	Asn	Ala	Phe	Val	Thr	Thr	Pro	Met	Cys	Cys	Pro	80	85	90	
Ser	Arg	Ser	Ser	Ile	Leu	Thr	Gly	Lys	Tyr	Val	His	Asn	His	Asn	95	100	105	
Thr	Tyr	Thr	Asn	Asn	Glu	Asn	Cys	Ser	Ser	Pro	Ser	Trp	Gln	Ala	110	115	120	
Gln	His	Glu	Ser	Arg	Thr	Phe	Ala	Val	Tyr	Leu	Asn	Ser	Thr	Gly	125	130	135	
Tyr	Arg	Thr	Ala	Phe	Phe	Gly	Lys	Tyr	Leu	Asn	Glu	Tyr	Asn	Gly	140	145	150	
Ser	Tyr	Val	Pro	Pro	Gly	Trp	Lys	Glu	Trp	Val	Gly	Leu	Leu	Lys	155	160	165	
Asn	Ser	Arg	Phe	Tyr	Asn	Tyr	Thr	Leu	Cys	Arg	Asn	Gly	Val	Lys	170	175	180	
Glu	Lys	His	Gly	Ser	Asp	Tyr	Ser	Lys	Tyr	Leu	Thr	Asp	Leu	185	190	195		
Ile	Thr	Asn	Asp	Ser	Val	Ser	Phe	Phe	Arg	Thr	Ser	Lys	Lys	Met	200	205	210	
Tyr	Pro	His	Arg	Pro	Val	Leu	Met	Val	Ile	Ser	His	Ala	Ala	Pro	215	220	225	
His	Gly	Pro	Glu	Asp	Ser	Ala	Pro	Gln	Tyr	Ser	Arg	Leu	Phe	Pro	230	235	240	
Asn	Ala	Ser	Gln	His	Ile	Thr	Pro	Ser	Tyr	Asn	Tyr	Ala	Pro	Asn	245	250	255	

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	
				260						265				270	
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln	
				275						280				285	
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met	
				290						295				300	
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr	
				305						310				315	
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly	
				320						325				330	
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val	
				335						340				345	
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val	
				350						355				360	
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu	
				365						370				375	
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu	
				380						385				390	
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	
				395						400				405	
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	
				410						415				420	
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	
				425						430				435	
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	
				440						445				450	
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	
				455						460				465	
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	
				470						475				480	
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	
				485						490				495	
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	
				500						505				510	
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys	
				515						520				525	
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val	
				530						535				540	
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp	
				545						550				555	
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala	
				560						565				570	

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr	
				575					580					585	
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr	
				590					595					600	
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu	
				605					610					615	
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His	
				620					625					630	
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu	
				635					640					645	
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys	
				650					655					660	
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	
				665					670					675	
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	
				680					685					690	
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	
				695					700					705	
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	
				710					715					720	
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	
				725					730					735	
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	
				740					745					750	
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	
				755					760					765	
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	
				770					775					780	
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val	
				785					790					795	
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu	
				800					805					810	
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg	
				815					820					825	
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				830					835					840	
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser	
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<210> 85
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 <212> DNA

<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
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<210> 86
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<223> Synthetic oligonucleotide probe
<400> 86
ggccagctat ctccgcag 18
<210> 87
<211> 18
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 87
aagggcctgc aagagaag 18
<210> 88
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<223> Synthetic oligonucleotide probe
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cactgggaca actgtggg 18
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<223> Synthetic oligonucleotide probe
<400> 89
cagaggcaac gtggagag 18
<210> 90
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<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 90
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<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
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<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcataccaac tgctgggtcat tggc 24

<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

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<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

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 ccctgagaat gtccttttgg ttggagaag gcagtgtgag gctgcacagt 900
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 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
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 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

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 gctgaogctg ctggcctttg ccgggtactc agggctactg gctgggggtg 150
 aagtgaagtgc tgggtcacc cccatccgca acgtcactgt ggctacaag 200
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 cagcatctct cccaagctcc gctccatgc tgtctactat gacaaccccc 300

acatggtgcc ccctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaaggtgagg aatcgccctc ccctgagctc atcgacctct accagaaatt 400
 tggcctcaag gtgttctcct tcccgccacc cagccatgtg gtgacagcca 450
 ccttcccta caccaccatt ctgtccatct ggctggctac ccgacctgtc 500
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 caccctctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050
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 ctttaggctc ccagggccag aggagccagg gactatttct tgcaccagcc 1200
 cccagggtg ccgccccgtg tgtgtctttt ttccagactc acagtggagc 1250
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 aaaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
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 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg
 65 70 75

Ser	Ile	Ala	Val	Tyr	Asp	Asn	Pro	His	Met	Val	Pro	Pro	Asp	80	85	90
Lys	Cys	Arg	Cys	Ala	Val	Gly	Ser	Ile	Leu	Ser	Glu	Gly	Glu	95	100	105
Ser	Pro	Ser	Pro	Glu	Leu	Ile	Asp	Leu	Tyr	Gln	Lys	Phe	Gly	110	115	120
Lys	Val	Phe	Ser	Phe	Pro	Ala	Pro	Ser	His	Val	Val	Thr	Ala	125	130	135
Phe	Pro	Tyr	Thr	Thr	Ile	Leu	Ser	Ile	Trp	Leu	Ala	Thr	Arg	140	145	150
Val	His	Pro	Ala	Leu	Asp	Thr	Tyr	Ile	Lys	Glu	Arg	Lys	Leu	155	160	165
Ala	Tyr	Pro	Arg	Leu	Glu	Ile	Tyr	Gln	Glu	Asp	Gln	Ile	His	170	175	180
Met	Cys	Pro	Leu	Ala	Arg	Gln	Gly	Asp	Phe	Tyr	Val	Pro	Glu	185	190	195
Lys	Glu	Thr	Glu	Trp	Lys	Trp	Arg	Gly	Leu	Val	Glu	Ala	Ile	200	205	210
Thr	Gln	Val	Asp	Gly	Thr	Gly	Ala	Asp	Thr	Met	Ser	Asp	Thr	215	220	225
Ser	Val	Ser	Leu	Glu	Val	Ser	Pro	Gly	Ser	Arg	Glu	Thr	Ser	230	235	240
Ala	Thr	Leu	Ser	Pro	Gly	Ala	Ser	Ser	Arg	Gly	Trp	Asp	Asp	245	250	255
Asp	Thr	Arg	Ser	Glu	His	Ser	Tyr	Ser	Glu	Ser	Gly	Ala	Ser	260	265	270
Ser	Ser	Phe	Glu	Glu	Leu	Asp	Leu	Glu	Gly	Glu	Gly	Pro	Leu	275	280	285
Glu	Ser	Arg	Leu	Asp	Pro	Gly	Thr	Glu	Pro	Leu	Gly	Thr	Thr	290	295	300
Trp	Leu	Trp	Glu	Pro	Thr	Ala	Pro	Glu	Lys	Gly	Lys	Glu		305	310	

<210> 98

<211> 725

<212> DNA

<213> Homo sapiens

<400> 98

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ctgaggctgg gctcgaaacc gaaagtcgcc tccggaccct ccaagtgagg 200

accctgggtg agccccaga accatgtgcc gagcccgctg cttttggaga 250

cacgcttcac atacactaca cggaagcgtt gtagatgga cgtattattg 300
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 caccatctgt cccagcggat gcagtgggtc agtatgacgt ggagctgatt 500
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 tctggtaggg atggccatgg tgcagccct cctgggctc attgggtatc 600
 acctatacag aaaggccaat agacccaaag tctccaaaaa gaagctcaag 650
 gaagagaaac gaaacaagag caaaaagaaa taataataa taaattttaa 700
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99

<211> 201

<212> PRT

<213> Homo sapiens

<400> 99

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Thr	Glu	Ser	Pro	Val	Arg	Thr	Leu	Gln	Val	Glu	Thr	Leu	Val	Glu	35	40	45	
Pro	Pro	Glu	Pro	Cys	Ala	Glu	Pro	Ala	Ala	Phe	Gly	Asp	Thr	Leu	50	55	60	
His	Ile	His	Tyr	Thr	Gly	Ser	Leu	Val	Asp	Gly	Arg	Ile	Ile	Asp	65	70	75	
Thr	Ser	Leu	Thr	Arg	Asp	Pro	Leu	Val	Ile	Glu	Leu	Gly	Gln	Lys	80	85	90	
Gln	Val	Ile	Pro	Gly	Leu	Glu	Gln	Ser	Leu	Leu	Asp	Met	Cys	Val	95	100	105	
Gly	Glu	Lys	Arg	Arg	Ala	Ile	Ile	Pro	Ser	His	Leu	Ala	Tyr	Gly	110	115	120	
Lys	Arg	Gly	Phe	Pro	Pro	Ser	Val	Pro	Ala	Asp	Ala	Val	Val	Gln	125	130	135	
Tyr	Asp	Val	Glu	Leu	Ile	Ala	Leu	Ile	Arg	Ala	Asn	Tyr	Trp	Leu	140	145	150	
Lys	Leu	Val	Lys	Gly	Ile	Leu	Pro	Leu	Val	Gly	Met	Ala	Met	Val	155	160	165	
Pro	Ala	Leu	Leu	Gly	Leu	Ile	Gly	Tyr	His	Leu	Tyr	Arg	Lys	Ala	170	175	180	
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Asn Lys Ser Lys Lys Lys
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<210> 100
<211> 705
<212> DNA
<213> Homo sapiens

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gaggctgggc tcgaaaccga aagtcgccgc cggaacctcc aagtggagac 200
cctggtggag cccccagAAC catgtgccga gccgctgctt tttggagaca 250
cgcttcacat aactacacg ggaagcttg tagatggacg tattattgac 300
acctccctga ccagagaccc tctggttata gaacttgcc aaaagcagg 350
gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggcaat cattccttct cacttggcct atggaaaacg gggatttcca 450
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actaatccga gccaaactact ggctaagcct ggtgaagggc attttgcctc 550
tggttaggat ggccatggtg ccacctcct gggcctcatt gggatcacc 600
tatacagaaa ggccaataga ccaaaagtct ccaaaaagaa gctcaaggaa 650
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700
actta 705

<210> 101
<211> 543
<212> DNA
<213> Homo sapiens

<400> 101
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cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
acctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggc caatcattcc 250
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atgcagtgtg gcagtatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggaaggccat 400

ggtgccagcc ctctgggccc tcattgggta tcacctatac agaaaggcca 450
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agcaaaaaga aataataaat aataaatattt aaaaaactta aaa 543

<210> 102

<211> 1316

<212> DNA

<213> Homo sapiens

<400> 102

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ccaactgcacg acggggctgg actgacctga aaaaaatgtc tggattttcta 150
gagggcctga gatgctcaga atgcattgac tggggggaaa agcgaatac 200
tattgcttcc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250
tcatagatgc agctgttatt tatcccacca tgaaagattt caaccactca 300
taccatgcct gtggtgttat agcaaccata gccttctctaa tgattaatgc 350
agtatcgaat ggacaagtcc gaggtgatag ttacagttaa ggttgtctcg 400
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agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
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tggaagttaa cacatctgat ttcccacagc acaacagccc tgcattgggtt 650
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aactttattc tgagtgtagt ctacgcttaa agttgtgtaa tactaaaatc 750
acgagaacac ctaacaaca accaaaaatc tatttggtga tgcacttgat 800
taacttataa aatgttagag gaaactttca catgaataat ttttgcataa 850
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tgtcccttcc atgggaaggt ctccgcgtgt gcctctcatt ccaagggcag 1250
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<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

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				20					25					30
Leu	Phe	Phe	Thr	Gly	Trp	Trp	Ile	Ile	Ile	Asp	Ala	Ala	Val	Ile
				35					40					45
Tyr	Pro	Thr	Met	Lys	Asp	Phe	Asn	His	Ser	Tyr	His	Ala	Cys	Gly
				50					55					60
Val	Ile	Ala	Thr	Ile	Ala	Phe	Leu	Met	Ile	Asn	Ala	Val	Ser	Asn
				65					70					75
Gly	Gln	Val	Arg	Gly	Asp	Ser	Tyr	Ser	Glu	Gly	Cys	Leu	Gly	Gln
				80					85					90
Thr	Gly	Ala	Arg	Ile	Trp	Leu	Phe	Val	Gly	Phe	Met	Leu	Ala	Phe
				95					100					105
Gly	Ser	Leu	Ile	Ala	Ser	Met	Trp	Ile	Leu	Phe	Gly	Gly	Tyr	Val
				110					115					120
Ala	Lys	Glu	Lys	Asp	Ile	Val	Tyr	Pro	Gly	Ile	Ala	Val	Phe	Phe
				125					130					135
Gln	Asn	Ala	Phe	Ile	Phe	Phe	Gly	Gly	Leu	Val	Phe	Lys	Phe	Gly
				140					145					150
Arg	Thr	Glu	Asp	Leu	Trp	Gln								
				155										

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

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tggatttcta gagggttga gatgctcaga atgcattgac tggggggaaa 150
agcgaatac tattgttccc attgctgctg gtgtactatt ttttacaggc 200
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tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagttaa 350
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gttggccttt ggatctctga ttgcatctat gtggattcct tttggagggt 450
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 cagaatgcct tcatcttttt tggagggtgc gtttttaagt ttggc 545

<210> 105
 <211> 490
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 31, 39, 108, 145, 179, 219, 412, 479
 <223> unknown base

<400> 105
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 tttatccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
 atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250
 ccgaggtgat agttacagtg aagggtgttt gggtaaaaca ggtgctcgca 300
 tttggctttt cgttggttcc atgttggcct ttggatctct gattgcattc 350
 atgtggattc tttttggagg ttattgttgc aaagaaaaag acatagtata 400
 ccctggaatt gntgtatttt tccagaatgc ctcatcttt tttggagggc 450
 tgggttttaa gtttggccgc actgaagant tatggcagt 490

<210> 106
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449
 <223> unknown base

<400> 106
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 acagggtggt ggattatcat agatgcagct gttattttat ccaccatgaa 200
 agatttnaac cactcatacc atgcctgttg tgttatagca accatagcct 250
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 agtgaagggt gtttgggtca aacagggtgt cgcatttggc ttttcgttgg 350
 tttcatgttg gcctttggat ttctgattgn attctatgag gattcttctt 400

ggaggttatg ttgctaaaga aaaagacata gtataccctg gaattnctnt 450
atttttccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

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ttatnataga tgcagctggt atttatccca ccatgaaaga ttnaaccan 150
tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200
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tgggtcaaac aggtgntngc atttggtctt tngttggttt catgttggcc 300
tttggatctn tgattgcatt tatgtggatt ntttttgag gttatgttc 350
taaagnaaaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

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ggactgacct gaaaaaaaaatg tttggatttn tagaggcctt gagatgctca 150
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tgggtgacta ttttttacag gctggtggat tatcatagat gcagctgtta 250
ttatcccac catgaaagat ttoaaccact cataccatgc ctgtggtgtt 300
atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt 350
ccgaggtgat agttacatg aaggttgctt gggtaaaaca ggtgctcgca 400
tttggctttt cgttggtttc atgttggcct ttggaatnct gattgcactc 450
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tg 552

<210> 109

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 109

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<210> 110

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 110

tggtgtgctg tgggaaatca gatgtg 26

<210> 111

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 111

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<210> 112

<211> 3004

<212> DNA

<213> Homo sapiens

<400> 112

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 acttaccat aatgtcttc tgcattagtt ccttgacagt ataaagcact 1950
 ctaatttgg tctgatgct gaagagaggc ctagtttaaa tcacaattcc 2000
 gaatctgggg caatggaac actgcttcca gctggggcag gtgagatctt 2050
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<210> 113

<211> 610

<212> PRT

<213> Homo sapiens

<400> 113

Met Trp Leu Pro Leu Val Leu Leu Leu Ala Val Leu Leu Leu Ala
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 20 25 30
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 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile	110	120
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile	125	135
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser	140	150
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys	155	165
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu	170	180
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile	185	195
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu	200	210
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys	215	225
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln	230	240
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu	245	255
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	260	270
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	275	285
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	290	300
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	305	315
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	320	330
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	335	345
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	350	360
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	365	375
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	380	390
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	395	405
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	410	420

Glu Arg Tyr Val	Ser Met Pro Arg Glu	Glu Ala Ala Glu His Ile
	425	430 435
Pro Leu Leu Phe	Phe Ala Phe Pro Ser	Ala Lys Asp Pro Thr Trp
	440	445 450
Glu Asp Arg Phe	Pro Gly Arg Ser Thr	Met Ile Met Leu Ile Pro
	455	460 465
Thr Ala Tyr Glu	Trp Phe Glu Glu Trp	Gln Ala Glu Leu Lys Gly
	470	475 480
Lys Arg Gly Ser	Asp Tyr Glu Thr Phe	Lys Asn Ser Phe Val Glu
	485	490 495
Ala Ser Met Ser	Val Val Leu Lys Leu	Phe Pro Gln Leu Glu Gly
	500	505 510
Lys Val Glu Ser	Val Thr Ala Gly Ser	Pro Leu Thr Asn Gln Phe
	515	520 525
Tyr Leu Ala Ala	Pro Arg Gly Ala Cys	Tyr Gly Ala Asp His Asp
	530	535 540
Leu Gly Arg Leu	His Pro Cys Val Met	Ala Ser Leu Arg Ala Gln
	545	550 555
Ser Pro Ile Pro	Asn Leu Tyr Leu Thr	Gly Gln Asp Ile Phe Thr
	560	565 570
Cys Gly Leu Val	Gly Ala Leu Gln Gly	Ala Leu Leu Cys Ser Ser
	575	580 585
Ala Ile Leu Lys	Arg Asn Leu Tyr Ser	Asp Leu Lys Asn Leu Asp
	590	595 600
Ser Arg Ile Arg	Ala Gln Lys Lys Lys	Asn
	605	610

<210> 114

<211> 1701

<212> DNA

<213> Homo sapiens

<400> 114

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 gatagggtcg acgctgctgc tgtgtgcggt gctgctgagc ttggcctcgg 150
 cgtcctcgga tgaagaaggc agccaggatg aatccttaga ttccaagact 200
 actttgacat cagatgagtc agtaaggagc catactactg caggcagagt 250
 agttgtcggt caaatatttc ttgattcaga agaattctgaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaaaggagg ggaaggtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaaccagc ttgaccgcc attgaaggca 450

cagcacatgg ggagccctgc cacttccctt ttcttttctt agataaggag 500
 tatgatgaat gtacatcaga tgggagggaa gatggcagac tgtggtgtgc 550
 tacaacctat gactacaaag cagatgaaaa gtggggcttt tgtgaaactg 600
 aagaagaggc tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650
 caaacttgaa tgaaaatcct taatggaagc aataagaaaa gccaaaaaa 700
 agaagcatat cggatatctc aaaaggcagc aagcatgaac cataccaaa 750
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 aatatccagg cagcgagaga gatgtttgag aagctgactg aggaaggctc 850
 tcccaaggga cagactgctc ttggttttct gtatgcctct ggacttgggt 900
 ttaattcaag tcaggcaaag gctcttgtat attatacatt tggagctctt 950
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 ggctaataat attaacatca gaagaatttg tggtttatag cggccacaac 1050
 tttttcagct ttcgatgacc agatttgctt gtattaagac caaatattca 1100
 gttgaacttc ttccaaattc ttgttaatgg atataacaca tggaatctac 1150
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 a 1701

<210> 115

<211> 301

<212> PRT

<213> Homo sapiens

<400> 115

Met	Arg	Val	Arg	Ile	Gly	Leu	Thr	Leu	Leu	Leu	Cys	Ala	Val	Leu
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Leu	Ser	Leu	Ala	Ser	Ala	Ser	Ser	Asp	Glu	Glu	Gly	Ser	Gln	Asp
			20					25					30	

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val
				35					40					45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe
				50					55					60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu
				65					70					75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp
				80					85					90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu
				95					100					105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly
				110					115					120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp
				125					130					135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg
				140					145					150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp
				155					160					165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met
				170					175					180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn
				185					190					195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu
				200					205					210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val
				215					220					225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln
				230					235					240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro
				245					250					255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly
				260					265					270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly
				275					280					285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg
				290					295					300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens
 <400> 116

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 ctctcttctg atggggacct tctgtcagc tccccagaca gtctctggccc 150
 agctggatgc actgctggc tccccaggcc aagtggctca actctctgc 200
 acgctcagcc cccagcacgt caccatcagg gactacggcg tgctctggta 250
 ccagcagcgg gcaggcagtg cccctcgata tctctctac tacgctcgg 300
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 aaggatgagg cccacaatgc ctgtgtcctc accattagtc ccgtgcagcc 400
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 aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc atttctgccc 500
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 aaaatggggt aataatattc aacatgtcaa caac 584

<210> 117

<211> 123

<212> PRT

<213> Homo sapiens

<400> 117

Met	Ala	Cys	Arg	Cys	Leu	Ser	Phe	Leu	Leu	Met	Gly	Thr	Phe	Leu
1				5						10				15

Ser	Val	Ser	Gln	Thr	Val	Leu	Ala	Gln	Leu	Asp	Ala	Leu	Leu	Val
				20					25					30

Phe	Pro	Gly	Gln	Val	Ala	Gln	Leu	Ser	Cys	Thr	Leu	Ser	Pro	Gln
				35					40					45

His	Val	Thr	Ile	Arg	Asp	Tyr	Gly	Val	Ser	Trp	Tyr	Gln	Gln	Arg
				50					55					60

Ala	Gly	Ser	Ala	Pro	Arg	Tyr	Leu	Leu	Tyr	Tyr	Arg	Ser	Glu	Glu
				65					70					75

Asp	His	His	Arg	Pro	Ala	Asp	Ile	Pro	Asp	Arg	Phe	Ser	Ala	Ala
				80					85					90

Lys	Asp	Glu	Ala	His	Asn	Ala	Cys	Val	Leu	Thr	Ile	Ser	Pro	Val
				95					100					105

Gln	Pro	Glu	Asp	Asp	Ala	Asp	Tyr	Tyr	Cys	Ser	Val	Gly	Tyr	Gly
				110					115					120

Phe Ser Pro

<210> 118

<211> 3402

<212> DNA

<213> Homo sapiens

<400> 118

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 tgaogcogag cccctgttg ctgtcctgc tgcgcgct gctgctgggg 200
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 aa 3402

<210> 119

<211> 504

<212> PRT

<213> Homo sapiens

<400> 119

Met	Thr	Pro	Ser	Pro	Leu	Leu	Leu	Leu	Leu	Leu	Pro	Pro	Leu	Leu	1	5	10	15
Leu	Gly	Ala	Phe	Pro	Pro	Ala	Ala	Ala	Ala	Arg	Gly	Pro	Pro	Lys	20	25	30	
Met	Ala	Asp	Lys	Val	Val	Pro	Arg	Gln	Val	Ala	Arg	Leu	Gly	Arg	35	40	45	
Thr	Val	Arg	Leu	Gln	Cys	Pro	Val	Glu	Gly	Asp	Pro	Pro	Pro	Leu	50	55	60	
Thr	Met	Trp	Thr	Lys	Asp	Gly	Arg	Thr	Ile	His	Ser	Gly	Trp	Ser	65	70	75	
Arg	Phe	Arg	Val	Leu	Pro	Gln	Gly	Leu	Lys	Val	Lys	Gln	Val	Glu	80	85	90	
Arg	Glu	Asp	Ala	Gly	Val	Tyr	Val	Cys	Lys	Ala	Thr	Asn	Gly	Phe	95	100	105	
Gly	Ser	Leu	Ser	Val	Asn	Tyr	Thr	Leu	Val	Val	Leu	Asp	Asp	Ile	110	115	120	
Ser	Pro	Gly	Lys	Glu	Ser	Leu	Gly	Pro	Asp	Ser	Ser	Ser	Gly	Gly	125	130	135	
Gln	Glu	Asp	Pro	Ala	Ser	Gln	Gln	Trp	Ala	Arg	Pro	Arg	Phe	Thr	140	145	150	
Gln	Pro	Ser	Lys	Met	Arg	Arg	Arg	Val	Ile	Ala	Arg	Pro	Val	Gly	155	160	165	
Ser	Ser	Val	Arg	Leu	Lys	Cys	Val	Ala	Ser	Gly	His	Pro	Arg	Pro	170	175	180	
Asp	Ile	Thr	Trp	Met	Lys	Asp	Asp	Gln	Ala	Leu	Thr	Arg	Pro	Glu	185	190	195	
Ala	Ala	Glu	Pro	Arg	Lys	Lys	Lys	Trp	Thr	Leu	Ser	Leu	Lys	Asn	200	205	210	
Leu	Arg	Pro	Glu	Asp	Ser	Gly	Lys	Tyr	Thr	Cys	Arg	Val	Ser	Asn	215	220	225	
Arg	Ala	Gly	Ala	Ile	Asn	Ala	Thr	Tyr	Lys	Val	Asp	Val	Ile	Gln	230	235	240	

Arg Thr Arg Ser	Lys Pro Val Leu Thr Gly Thr His Pro Val Asn	245	250	255
Thr Thr Val Asp	Phe Gly Gly Thr Thr Ser Phe Gln Cys Lys Val	260	265	270
Arg Ser Asp Val	Lys Pro Val Ile Gln Trp Leu Lys Arg Val Glu	275	280	285
Tyr Gly Ala Glu	Gly Arg His Asn Ser Thr Ile Asp Val Gly Gly	290	295	300
Gln Lys Phe Val	Val Leu Pro Thr Gly Asp Val Trp Ser Arg Pro	305	310	315
Asp Gly Ser Tyr	Leu Asn Lys Leu Leu Ile Thr Arg Ala Arg Gln	320	325	330
Asp Asp Ala Gly	Met Tyr Ile Cys Leu Gly Ala Asn Thr Met Gly	335	340	345
Tyr Ser Phe Arg	Ser Ala Phe Leu Thr Val Leu Pro Asp Pro Lys	350	355	360
Pro Pro Gly Pro	Pro Val Ala Ser Ser Ser Ser Ala Thr Ser Leu	365	370	375
Pro Trp Pro Val	Val Ile Gly Ile Pro Ala Gly Ala Val Phe Ile	380	385	390
Leu Gly Thr Leu	Leu Leu Trp Leu Cys Gln Ala Gln Lys Lys Pro	395	400	405
Cys Thr Pro Ala	Pro Ala Pro Pro Leu Pro Gly His Arg Pro Pro	410	415	420
Gly Thr Ala Arg	Asp Arg Ser Gly Asp Lys Asp Leu Pro Ser Leu	425	430	435
Ala Ala Leu Ser	Ala Gly Pro Gly Val Gly Leu Cys Glu Glu His	440	445	450
Gly Ser Pro Ala	Ala Pro Gln His Leu Leu Gly Pro Gly Pro Val	455	460	465
Ala Gly Pro Lys	Leu Tyr Pro Lys Leu Tyr Thr Asp Ile His Thr	470	475	480
His Thr His Thr	His Ser His Thr His Ser His Val Glu Gly Lys	485	490	495
Val His Gln His	Ile His Tyr Gln Cys	500		

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<220>

<223> Synthetic oligonucleotide probe

<400> 120

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<210> 121
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 <212> DNA
 <213> Homo sapiens

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<211> 1184

<212> PRT

<213> Homo sapiens

<400> 124

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Val	Thr	Ser	Val	Leu	Gly	Arg	Gln	Thr	Met	Leu	Thr	Gln	Ser	Val
				20					25					30
Arg	Arg	Val	Gln	Pro	Gly	Lys	Lys	Asn	Pro	Ser	Ile	Phe	Ala	Lys
				35					40					45
Pro	Ala	Asp	Thr	Leu	Glu	Ser	Pro	Gly	Glu	Trp	Thr	Thr	Trp	Phe
				50					55					60
Asn	Ile	Asp	Tyr	Pro	Gly	Gly	Lys	Gly	Asp	Tyr	Glu	Arg	Leu	Asp
				65					70					75
Ala	Ile	Arg	Phe	Tyr	Thr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu
				80					85					90
Arg	Leu	Glu	Ala	Arg	Thr	Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr
				95					100					105
Gly	Gln	Val	Val	His	Gly	Ser	Pro	Arg	Glu	Gly	Phe	Trp	Cys	Leu
				110					115					120
Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	Asn	Cys	Ser	Asn	Tyr	Thr	Val
				125					130					135
Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	Arg	Arg	Asp	Thr	Glu	Arg
				140					145					150
Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	Cys	Ser	Ala	Ala	Cys
				155					160					165
Gly	Gln	Thr	Gly	Val	Gln	Thr	Arg	Thr	Arg	Ile	Cys	Leu	Ala	Glu
				170					175					180
Met	Val	Ser	Leu	Cys	Ser	Glu	Ala	Ser	Glu	Glu	Gly	Gln	His	Cys
				185					190					195
Met	Gly	Gln	Asp	Cys	Thr	Ala	Cys	Asp	Leu	Thr	Cys	Pro	Met	Gly
				200					205					210

Gln Val Asn Ala	Asp Cys Asp Ala Cys Met Cys Gln Asp Phe Met	215	220	225
Leu His Gly Ala	Val Ser Leu Pro Gly Gly Ala Pro Ala Ser Gly	230	235	240
Ala Ala Ile Tyr	Leu Leu Thr Lys Thr Pro Lys Leu Leu Thr Gln	245	250	255
Thr Asp Ser Asp	Gly Arg Phe Arg Ile Pro Gly Leu Cys Pro Asp	260	265	270
Gly Lys Ser Ile	Leu Lys Ile Thr Lys Val Lys Phe Ala Pro Ile	275	280	285
Val Leu Thr Met	Pro Lys Thr Ser Leu Lys Ala Ala Thr Ile Lys	290	295	300
Ala Glu Phe Val	Arg Ala Glu Thr Pro Tyr Met Val Met Asn Pro	305	310	315
Glu Thr Lys Ala	Arg Arg Ala Gly Gln Ser Val Ser Leu Cys Cys	320	325	330
Lys Ala Thr Gly	Lys Pro Arg Pro Asp Lys Tyr Phe Trp Tyr His	335	340	345
Asn Asp Thr Leu	Leu Asp Pro Ser Leu Tyr Lys His Glu Ser Lys	350	355	360
Leu Val Leu Arg	Lys Leu Gln Gln His Gln Ala Gly Glu Tyr Phe	365	370	375
Cys Lys Ala Gln	Ser Asp Ala Gly Ala Val Lys Ser Lys Val Ala	380	385	390
Gln Leu Ile Val	Thr Ala Ser Asp Glu Thr Pro Cys Asn Pro Val	395	400	405
Pro Glu Ser Tyr	Leu Ile Arg Leu Pro His Asp Cys Phe Gln Asn	410	415	420
Ala Thr Asn Ser	Phe Tyr Tyr Asp Val Gly Arg Cys Pro Val Lys	425	430	435
Thr Cys Ala Gly	Gln Gln Asp Asn Gly Ile Arg Cys Arg Asp Ala	440	445	450
Val Gln Asn Cys	Cys Gly Ile Ser Lys Thr Glu Glu Arg Glu Ile	455	460	465
Gln Cys Ser Gly	Tyr Thr Leu Pro Thr Lys Val Ala Lys Glu Cys	470	475	480
Ser Cys Gln Arg	Cys Thr Glu Thr Arg Ser Ile Val Arg Gly Arg	485	490	495
Val Ser Ala Ala	Asp Asn Gly Glu Pro Met Arg Phe Gly His Val	500	505	510
Tyr Met Gly Asn	Ser Arg Val Ser Met Thr Gly Tyr Lys Gly Thr	515	520	525

Phe Thr Leu His Val Pro Gln Asp Thr	Glu Arg Leu Val Leu Thr
530	535
Phe Val Asp Arg Leu Gln Lys Phe Val	Asn Thr Thr Lys Val Leu
545	550
Pro Phe Asn Lys Lys Gly Ser Ala Val	Phe His Glu Ile Lys Met
560	565
Leu Arg Arg Lys Glu Pro Ile Thr Leu	Glu Ala Met Glu Thr Asn
575	580
Ile Ile Pro Leu Gly Glu Val Val Gly	Glu Asp Pro Met Ala Glu
590	595
Leu Glu Ile Pro Ser Arg Ser Phe Tyr	Arg Gln Asn Gly Glu Pro
605	610
Tyr Ile Gly Lys Val Lys Ala Ser Val	Thr Phe Leu Asp Pro Arg
620	625
Asn Ile Ser Thr Ala Thr Ala Ala Gln	Thr Asp Leu Asn Phe Ile
635	640
Asn Asp Glu Gly Asp Thr Phe Pro Leu	Arg Thr Tyr Gly Met Phe
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Ser Val Asp Phe Arg Asp Glu Val Thr	Ser Glu Pro Leu Asn Ala
665	670
Gly Lys Val Lys Val His Leu Asp Ser	Thr Gln Val Lys Met Pro
680	685
Glu His Ile Ser Thr Val Lys Leu Trp	Ser Leu Asn Pro Asp Thr
695	700
Gly Leu Trp Glu Glu Glu Gly Asp Phe	Lys Phe Glu Asn Gln Arg
710	715
Arg Asn Lys Arg Glu Asp Arg Thr Phe	Leu Val Gly Asn Leu Glu
725	730
Ile Arg Glu Arg Arg Leu Phe Asn Leu	Asp Val Pro Glu Ser Arg
740	745
Arg Cys Phe Val Lys Val Arg Ala Tyr	Arg Ser Glu Arg Phe Leu
755	760
Pro Ser Glu Gln Ile Gln Gly Val Val	Ile Ser Val Ile Asn Leu
770	775
Glu Pro Arg Thr Gly Phe Leu Ser Asn	Pro Arg Ala Trp Gly Arg
785	790
Phe Asp Ser Val Ile Thr Gly Pro Asn	Gly Ala Cys Val Pro Ala
800	805
Phe Cys Asp Asp Gln Ser Pro Asp Ala	Tyr Ser Ala Tyr Val Leu
815	820
Ala Ser Leu Ala Gly Glu Glu Leu Gln	Ala Val Glu Ser Ser Pro
830	835

Lys Phe Asn Pro	Asn Ala Ile Gly Val	Pro Gln Pro Tyr Leu Asn
845	850	855
Lys Leu Asn Tyr	Arg Arg Thr Asp His	Glu Asp Pro Arg Val Lys
860	865	870
Lys Thr Ala Phe	Gln Ile Ser Met Ala	Lys Pro Arg Pro Asn Ser
875	880	885
Ala Glu Glu Ser	Asn Gly Pro Ile Tyr	Ala Phe Glu Asn Leu Arg
890	895	900
Ala Cys Glu Glu	Ala Pro Pro Ser Ala	Ala His Phe Arg Phe Tyr
905	910	915
Gln Ile Glu Gly	Asp Arg Tyr Asp Tyr	Asn Thr Val Pro Phe Asn
920	925	930
Glu Asp Asp Pro	Met Ser Trp Thr	Glu Asp Tyr Leu Ala Trp Trp
935	940	945
Pro Lys Pro Met	Glu Phe Arg Ala Cys	Tyr Ile Lys Val Lys Ile
950	955	960
Val Gly Pro Leu	Glu Val Asn Val Arg	Ser Arg Asn Met Gly Gly
965	970	975
Thr His Arg Arg	Thr Val Gly Lys Leu	Tyr Gly Ile Arg Asp Val
980	985	990
Arg Ser Thr Arg	Asp Arg Asp Gln	Pro Asn Val Ser Ala Ala Cys
995	1000	1005
Leu Glu Phe Lys	Cys Ser Gly Met Leu	Tyr Asp Gln Asp Arg Val
1010	1015	1020
Asp Arg Thr Leu	Val Lys Val Ile	Pro Gln Gly Ser Cys Arg Arg
1025	1030	1035
Ala Ser Val Asn	Pro Met Leu His	Glu Tyr Leu Val Asn His Leu
1040	1045	1050
Pro Leu Ala Val	Asn Asn Asp Thr	Ser Glu Tyr Thr Met Leu Ala
1055	1060	1065
Pro Leu Asp Pro	Leu Gly His Asn	Tyr Gly Ile Tyr Thr Val Thr
1070	1075	1080
Asp Gln Asp Pro	Arg Thr Ala Lys	Glu Ile Ala Leu Gly Arg Cys
1085	1090	1095
Phe Asp Gly Thr	Ser Asp Gly Ser	Ser Arg Ile Met Lys Ser Asn
1100	1105	1110
Val Gly Val Ala	Leu Thr Phe Asn	Cys Val Glu Arg Gln Val Gly
1115	1120	1125
Arg Gln Ser Ala	Phe Gln Tyr Leu	Gln Ser Thr Pro Ala Gln Ser
1130	1135	1140
Pro Ala Ala Gly	Thr Val Gln Gly	Arg Val Pro Ser Arg Arg Gln
1145	1150	1155

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
1160 1165 1170

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<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<210> 126

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

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<210> 127

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 127

ctggagcaag tgctcagctg cctgtggtca gactggggtc 40

<210> 128

<211> 2819

<212> DNA

<213> Homo sapiens

<400> 128

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<210> 129

<211> 438

<212> PRT

<213> Homo sapiens

<400> 129

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Val	Ser	Ser	Val	Met	Gln	Pro	Tyr	Pro	Leu	Val	Trp	Gly	His	Tyr	30
				20					25						
Asp	Leu	Cys	Lys	Thr	Gln	Ile	Tyr	Thr	Glu	Glu	Gly	Lys	Val	Trp	45
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Asp	Tyr	Met	Ala	Cys	Gln	Pro	Glu	Ser	Thr	Asp	Met	Thr	Lys	Tyr	60
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Leu	Lys	Val	Lys	Leu	Asp	Pro	Pro	Asp	Ile	Thr	Cys	Gly	Asp	Pro	75
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Pro	Glu	Thr	Phe	Cys	Ala	Met	Gly	Asn	Pro	Tyr	Met	Cys	Asn	Asn	90
				80					85						
Glu	Cys	Asp	Ala	Ser	Thr	Pro	Glu	Leu	Ala	His	Pro	Pro	Glu	Leu	105
				95					100						
Met	Phe	Asp	Phe	Glu	Gly	Arg	His	Pro	Ser	Thr	Phe	Trp	Gln	Ser	120
				110					115						
Ala	Thr	Trp	Lys	Glu	Tyr	Pro	Lys	Pro	Leu	Gln	Val	Asn	Ile	Thr	

	125		130		135
Leu Ser Trp Ser	Lys Thr Ile Glu Leu	Thr Asp Asn Ile Val	Ile		
	140		145		150
Thr Phe Glu Ser	Gly Arg Pro Asp Gln	Met Ile Leu Glu Lys	Ser		
	155		160		165
Leu Asp Tyr Gly	Arg Thr Trp Gln Pro	Tyr Gln Tyr Tyr Ala	Thr		
	170		175		180
Asp Cys Leu Asp	Ala Phe His Met Asp	Pro Lys Ser Val Lys	Asp		
	185		190		195
Leu Ser Gln His	Thr Val Leu Glu Ile	Ile Cys Thr Glu Glu	Tyr		
	200		205		210
Ser Thr Gly Tyr	Thr Thr Asn Ser Lys	Ile Ile His Phe Glu	Ile		
	215		220		225
Lys Asp Arg Phe	Ala Leu Phe Ala Gly	Pro Arg Leu Arg Asn	Met		
	230		235		240
Ala Ser Leu Tyr	Gly Gln Leu Asp Thr	Thr Lys Lys Leu Arg	Asp		
	245		250		255
Phe Phe Thr Val	Thr Asp Leu Arg Ile	Arg Leu Leu Arg Pro	Ala		
	260		265		270
Val Gly Glu Ile	Phe Val Asp Glu Leu	His Leu Ala Arg Tyr	Phe		
	275		280		285
Tyr Ala Ile Ser	Asp Ile Lys Val Arg	Gly Arg Cys Lys Cys	Asn		
	290		295		300
Leu His Ala Thr	Val Cys Val Tyr Asp	Asn Ser Lys Leu Thr	Cys		
	305		310		315
Glu Cys Glu His	Asn Thr Thr Gly Pro	Asp Cys Gly Lys Cys	Lys		
	320		325		330
Lys Asn Tyr Gln	Gly Arg Pro Trp Ser	Pro Gly Ser Tyr Leu	Pro		
	335		340		345
Ile Pro Lys Gly	Thr Ala Asn Thr Cys	Ile Pro Ser Ile Ser	Ser		
	350		355		360
Ile Gly Thr Asn	Val Cys Asp Asn Glu	Leu Leu His Cys Gln	Asn		
	365		370		375
Gly Gly Thr Cys	His Asn Asn Val Arg	Cys Leu Cys Pro Ala	Ala		
	380		385		390
Tyr Thr Gly Ile	Leu Cys Glu Lys Leu	Arg Cys Glu Glu Ala	Gly		
	395		400		405
Ser Cys Gly Ser	Asp Ser Gly Gln Gly	Ala Pro Pro His Gly	Thr		
	410		415		420
Pro Ala Leu Leu	Leu Leu Thr Thr Leu	Leu Gly Thr Ala Ser	Pro		
	425		430		435
Leu Val Phe					

<210> 130
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 130
 tcgattatgg acgaacatgg cagc 24

 <210> 131
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 131
 ttctgagatc cctcatcctc 20

 <210> 132
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 132
 aggttcaggg acagcaagtt tggg 24

 <210> 133
 <211> 50
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 133
 tttgctggac ctcggtacg gaattggctt cctctacgg acagctggat 50

 <210> 134
 <211> 1493
 <212> DNA
 <213> Homo sapiens

 <400> 134
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 ctgaggaggc ggcgggtagc tggcaggcgc cgacttccga aggccgcctg 100
 ccgggcgagg tgtctcatg acttctcttg tggaccatgt ccgtgatctt 150
 ttttgctcgt gtggtacggg taagggatgg actgcccctc tcagcctcta 200
 ctgattttta ccacacccaa gatTTTTTgg aatggaggag acggctcaag 250
 agtttagcct tgcgactggc ccagtatcca ggtcgaggtt ctgcagaagg 300

ttgtgacttt agtatacatt tttcttcttt cggggacgtg gcctgcacgtg 350
 ctatctgctc ctgccagtggt ccagcagcca tggccttctg ctctcctggag 400
 accctgtggt gggaattcac agcttctctat gacactacct gcattggcct 450
 agcctccagg ccatacgctt ttcttgagtt tgacagcact attcagaaag 500
 tgaagtggca ttttaactat gtaagttcct ctcagatgga gtgcagcttg 550
 gaaaaaattc aggaggagct caagttgcag cctccagcgg ttctcactct 600
 ggagagacaca gatgtggcaa atggggtgat gaatgggtac acaccgatgc 650
 acttgagacc tgctcctaatt ttccgaatgg aaccagtgac agccctgggt 700
 atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750
 aggagttcac cttgcagaac attctttaca ggatccaagg agctggttct 800
 gctggttgga ccaaacctcg tgagccagcc acccctgacc caaatgagga 850
 gagctctgat tctcccatcc gggagcagtg atgtcaaact tctgctgctg 900
 gggaaatctc atcagcaggg agcctgtgga aaaggcactg tcagtgaagt 950
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 gctgttgccc acaagcgctt tttatttagg gtaaaattaa caaatccatt 1050
 ctattcctct gaccatgct tagtacatat gacctttaac ccttacattt 1100
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 gcataaaata ctgaggctga tttagtcagg gcaaaacctt ttactttaca 1250
 tattcgtttt caatacttgc tgttcattgt acacaagctt cttagcggtt 1300
 tcttgtaaca ataaatattt tgagtaaata atgggtacat ttaacaaac 1350
 tcagtagtac aacctaaact tgtataaaag tgtgtaaaaa tgtatagcca 1400
 tttatatcct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135

<211> 228

<212> PRT

<213> Homo sapiens

<400> 135

Met	Ser	Val	Ile	Phe	Phe	Ala	Cys	Val	Val	Arg	Val	Arg	Asp	Gly
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Leu	Pro	Leu	Ser	Ala	Ser	Thr	Asp	Phe	Tyr	His	Thr	Gln	Asp	Phe
				20					25					30
Leu	Glu	Trp	Arg	Arg	Arg	Leu	Lys	Ser	Leu	Ala	Leu	Arg	Leu	Ala
				35					40					45

Gln Tyr Pro Gly	Arg Gly Ser Ala Glu	Gly Cys Asp Phe Ser	Ile
	50	55	60
His Phe Ser Ser	Phe Gly Asp Val Ala	Cys Met Ala Ile Cys	Ser
	65	70	75
Cys Gln Cys Pro	Ala Ala Met Ala Phe	Cys Phe Leu Glu Thr	Leu
	80	85	90
Trp Trp Glu Phe	Thr Ala Ser Tyr Asp	Thr Thr Cys Ile Gly	Leu
	95	100	105
Ala Ser Arg Pro	Tyr Ala Phe Leu Glu	Phe Asp Ser Ile Ile	Gln
	110	115	120
Lys Val Lys Trp	His Phe Asn Tyr Val	Ser Ser Ser Gln Met	Glu
	125	130	135
Cys Ser Leu Glu	Lys Ile Gln Glu Glu	Leu Lys Leu Gln Pro	Pro
	140	145	150
Ala Val Leu Thr	Leu Glu Asp Thr Asp	Val Ala Asn Gly Val	Met
	155	160	165
Asn Gly His Thr	Pro Met His Leu Glu	Pro Ala Pro Asn Phe	Arg
	170	175	180
Met Glu Pro Val	Thr Ala Leu Gly Ile	Leu Ser Leu Ile Leu	Asn
	185	190	195
Ile Met Cys Ala	Ala Leu Asn Leu Ile	Arg Gly Val His Leu	Ala
	200	205	210
Glu His Ser Leu	Gln Asp Pro Arg Ser	Trp Phe Cys Trp Leu	Asp
	215	220	225
Gln Thr Ser			

<210> 136

<211> 239

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 39, 61, 143, 209

<223> unknown base

<400> 136

tgcttcctg agacctgtg gtgggaattc acagcttont atgacactac 50

ctgcattggc ntgcctcca ggccatacgc ttttcttgag tttagacagca 100

tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150

gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200

ggttctcant atggaggaca cagatgtggc aaatgggggt 239

<210> 137

<211> 2300

<212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgtcc 150
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200
cgaggaaaag ccctaggtc ggtgtgtggg gcttgcgccg ggcggcttcc 250
tccccgctcg tctccccgg gccagaggc acctcggtt cagtcatgct 300
gagcagagta tggaagcacc tgactacgaa gtgctatccg tgcgagaaca 350
gctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400
caacactgta catcctctgc cacatcttcc tgaccgctt caagaagcct 450
gctgagtcca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500
gctcgagctg tgcaccttta ccttgccaat tgccctgggt gctgtctctc 550
tcttgccctt ctccatcatc agcaatgagg tgctgtctct cctgctctcg 600
aactactaca tccagtggct caacggctcc ctcatccatg gcctctggaa 650
ccttgttttt ctcttcccca acctgtccct catcttctcc atgccctttg 700
catattttct cactgagtct gagggtcttg ctggctccag aaagggtgtc 750
ctgggcccgg tctatgagac agtgggtgat ttgatgctcc tcaactctgt 800
ggtgtcatgt atggtgtggg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttct tgggggtctg ctgctcctgg tgtgtactcc 950
actgggtctc gcccgcatgt tctcgtcac tgggaagctg ctagtcaagc 1000
cccggtctgt ggaagacctg gaggagcagc tgtactgctc agccttttag 1050
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tgtctcctgg tcctaagctc agcacttcct gtcttctctc gaacctctgg 1550
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 ggctacttgg acctcaggac ctggaatctg agaggggtgg tggcagaggg 1900
 gagcagagcc atctgcaact ttgcataatc tgagccagag tttgggacca 1950
 ggacctcctg cttttccata cttaactgtg gcctcagcat ggggtagggc 2000
 tgggtgactg ggtctagccc ctgatcccaa atctgtttac acatcaatct 2050
 gcctcactgc tgttctgggc catcccccata gccatgttta catgatttga 2100
 tgtgcaatag ggtggggtag gggcagggaagg actggggc cagggcaggc 2150
 tcgggagata gattgtctcc ctgcctctg gccacgcaga gcctaagcac 2200
 tgtgtctatc tggaggggct ttggaccacc tgaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatccca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu
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Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe
				20					25					30
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys
				35					40					45
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val
				50					55					60
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala
				65					70					75
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu
				80					85					90
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn
				95					100					105
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro
				110					115					120
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr

	125	130	135
Glu Ser Glu Gly	Phe Ala Gly Ser Arg	Lys Gly Val Leu Gly Arg	150
	140	145	
Val Tyr Glu Thr	Val Val Met Leu Met	Leu Leu Thr Leu Leu Val	165
	155	160	
Leu Gly Met Val	Trp Val Ala Ser Ala	Ile Val Asp Lys Asn Lys	180
	170	175	
Ala Asn Arg Glu	Ser Leu Tyr Asp Phe	Trp Glu Tyr Tyr Leu Pro	195
	185	190	
Tyr Leu Tyr Ser	Cys Ile Ser Phe Leu	Gly Val Leu Leu Leu Leu	210
	200	205	
Val Cys Thr Pro	Leu Gly Leu Ala Arg	Met Phe Ser Val Thr Gly	225
	215	220	
Lys Leu Leu Val	Lys Pro Arg Leu Leu	Glu Asp Leu Glu Glu Gln	240
	230	235	
Leu Tyr Cys Ser	Ala Phe Glu Glu Ala	Ala Leu Thr Arg Arg Ile	255
	245	250	
Cys Asn Pro Thr	Ser Cys Trp Leu Pro	Leu Asp Met Glu Leu Leu	270
	260	265	
His Arg Gln Val	Leu Ala Leu Gln Thr	Gln Arg Val Leu Leu Glu	285
	275	280	
Lys Arg Arg Lys	Ala Ser Ala Trp Gln	Arg Asn Leu Gly Tyr Pro	300
	290	295	
Leu Ala Met Leu	Cys Leu Leu Val Leu	Thr Gly Leu Ser Val Leu	315
	305	310	
Ile Val Ala Ile	His Ile Leu Glu Leu	Leu Ile Asp Glu Ala Ala	330
	320	325	
Met Pro Arg Gly	Met Gln Gly Thr Ser	Leu Gly Gln Val Ser Phe	345
	335	340	
Ser Lys Leu Gly	Ser Phe Gly Ala Val	Ile Gln Val Val Leu Ile	360
	350	355	
Phe Tyr Leu Met	Val Ser Ser Val Val	Gly Phe Tyr Ser Ser Pro	375
	365	370	
Leu Phe Arg Ser	Leu Arg Pro Arg Trp	His Asp Thr Ala Met Thr	390
	380	385	
Gln Ile Ile Gly	Asn Cys Val Cys Leu	Leu Val Leu Ser Ser Ala	405
	395	400	
Leu Pro Val Phe	Ser Arg Thr Leu Gly	Leu Thr Arg Phe Asp Leu	420
	410	415	
Leu Gly Asp Phe	Gly Arg Phe Asn Trp	Leu Gly Asn Phe Tyr Ile	435
	425	430	
Val Phe Leu Tyr	Asn Ala Ala Phe Ala	Gly Leu Thr Thr Leu Cys	

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val Arg Ala Glu Leu Ile Arg		
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu Pro Val Ser Gly Phe Pro		
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 53, 57
 <223> unknown base

<400> 139
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 ggnnttcctcc ccgctcgtcc tccccgggcc cagaggcacc tcggttcag 100
 tcactgctgag cagagtatgg aagcacctga ctacgaagtg ctatcctgtc 150
 gagaacacgt attccacgag aggatccgcy agtgattat atcaacactt 200
 ctgtttgcaa cactgtacat cctctgccac atcttctoga cccgcttcaa 250
 gaagcctgct gaggtcacca cagtggatga tgaagatgcc accg 294

<210> 140
 <211> 526
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 197, 349
 <223> unknown base

<400> 140
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50
 aggcgggtggt gcctgccctt taaggcgagg gcgtccggac gactgtatct 100
 gaggccccaga ctgccccgag tttctgtcgc aggcgtgcgag gaaaggcccc 150
 taggtgtgggt gctgtgcttg gcggcgccgg ctctctcccc gttgtctncc 200
 ccggggccccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
 cacctgacta cgaagtgccta tccgtgcgag aacagctatt ccacgagagg 300
 atccgcgagt gtattatata aacacttctg tttgcaacac tgtacatont 350
 ctgccacata ttccctgaccc gcttcaagaa gcctgctgag ttcaccacag 400
 tggatgatga agatgccacc gtcaacaaga ttgcgctoga gctgtgcacc 450

tttacccctgg caattgccct ggggtgctgtc ctgctctctgc ccttetccat 500

catcagcaat gaggtgctgc actccc 526

<210> 141

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 141

gactgtatct gagccccaga ctgc 24

<210> 142

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 142

tcagcaatga ggtgctgtc 20

<210> 143

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 143

tgaggaagat gagggacagg ttgg 24

<210> 144

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 144

tatggaagca cctgactacg aagtgtcttc cgtgcgagaa cagctattcc 50

<210> 145

<211> 685

<212> DNA

<213> Homo sapiens

<400> 145

gatgtgtctcc ttggagctgg tgtgcagtg cctgactgta agatcaagtc 50

caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100

tggtccaggt cttcatgctg ctgtgggtga tattactggc cctggctcct 150

gtcagtgga agtttgcaag gacaccagg ccattatct tccctccagg 200

tccatggacc acagtcttcc aaggagagag agtgaccctc acctgcaagg 250

gatttcgctt ctactcacca cagaaaaaaa aatggtacca tcggtacctt 300
 gggaagaaaa tactaagaga aaccccagac aatatacttg aggttcagga 350
 atctggagag tacagatgcc aggccaggg ctccccctc agtagccctg 400
 tgcacttgga tttttcttca gagatgggat ttctctatgc tgcccaggct 450
 aatgttgaa ctcctgggctc aagtgatctg ctcacctagg cctctcaaa 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaacactg 600
 aataatacta ttacaagaa tgataatgto ctggcattcc ttaataaaa 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 146
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 1 5 10 15
 Gln Phe Ala Arg Thr Pro Arg Pro Ile Ile Phe Leu Gln Pro Pro
 20 25 30
 Trp Thr Thr Val Phe Gln Gly Glu Arg Val Thr Leu Thr Cys Lys
 35 40 45
 Gly Phe Arg Phe Tyr Ser Pro Gln Lys Thr Lys Trp Tyr His Arg
 50 55 60
 Tyr Leu Gly Lys Glu Ile Leu Arg Glu Thr Pro Asp Asn Ile Leu
 65 70 75
 Glu Val Gln Glu Ser Gly Glu Tyr Arg Cys Gln Ala Gln Gly Ser
 80 85 90
 Pro Leu Ser Ser Pro Val His Leu Asp Phe Ser Ser Glu Met Gly
 95 100 105
 Phe Pro His Ala Ala Gln Ala Asn Val Glu Leu Leu Gly Ser Ser
 110 115 120
 Asp Leu Leu Thr

<210> 147
 <211> 1621
 <212> DNA
 <213> Homo sapiens

<400> 147
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 cgcgcggcg gagggagctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaccat ggctccgag aacctgagca ccttttgctt gttgctgcta 200
 tacctcatcg gggcggtgat tgccggacga gattttctata agatcttggg 250
 ggtgcctcga agtgccctcta taaaggatat taaaaaggcc tataggaaac 300
 tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
 gagaatttcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400
 gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
 atcagagctc ccattggagac attttttcac acttcttttg ggattttggt 500
 ttcatgtttg gaggaacccc togtcagcaa gacagaaata ttccaagagg 550
 aagtgtatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600
 gaaattttgt ggaagtagtt agaacaacaac ctgtggcaag gcaggctcct 650
 ggcaaacgga agtgcaattg toggcaagag atgcggacca cccagctggg 700
 ccctggggcg ttccaaatga cccaggaggt ggtctgcgac gaatgcccta 750
 atgtcaaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800
 ggggtgagag acggcatgga gtaccccttt attggagaag gtgagcctca 850
 cgtgtagtgg gagcctggag atttacgggt ccgaatcaaa gttgtcaagc 900
 acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950
 tcattagtgt agtcactggt tggctttgag atggatatta ctcaattgga 1000
 tggtcacaag gtacatatat cccgggataa gatcaccagg ccaggagcga 1050
 agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100
 aagggtctct tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150
 aacagaggaa gcgagagaag gtatcaaaaca gctactgaaa caagggtcag 1200
 tgcagaaggat atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
 gactttgttt aaaataagtg aataagcgat atttattatc tgcaagggtt 1300
 ttttgtgtgt gttttgttt ttattttcaa tatgcaagtt aggcctaatt 1350
 tttttatcta atgatcatca tgaaatgaat aagagggtct aagaatttgt 1400
 ccatttgcat tcggaagaaga atgaccagca aaaggtttac taatacctct 1450
 ccctttgggg atttaatgtc tgggtgctgc gcctgagttt caagaattaa 1500
 agctgcaaga ggactccagg agcaaaagaa acacaatata gagggttgga 1550
 gttgttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600
 tacattttgt tgttattttt a 1621

<210> 148
 <211> 358
 <212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr	
1				5					10					15	
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu	
				20					25					30	
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr	
				35					40					45	
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp	
				50					55					60	
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu	
				65					70					75	
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly	
				80					85					90	
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile	
				95					100					105	
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr	
				110					115					120	
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile	
				125					130					135	
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe	
				140					145					150	
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly	
				155					160					165	
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu	
				170					175					180	
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu	
				185					190					195	
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val	
				200					205					210	
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile	
				215					220					225	
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg	
				230					235					240	
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly	
				245					250					255	
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu	
				260					265					270	
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val	
				275					280					285	
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp	
				290					295					300	

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
 305 310 315
 Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
 320 325 330
 Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
 335 340 345
 Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
 350 355

<210> 149
 <211> 509
 <212> DNA
 <213> Homo sapiens
 <220>
 <221> unsure
 <222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445,
 482
 <223> unknown base

<400> 149
 tgggaccagg gaaccccggg ccccccgggtg gagngcctaa caggccgggtg 50
 gntgcgaccg aagcggcggg cggaggaggt tttgaggatt tttggaacag 100
 gaccocggaca gaggaaccat ggttcgcag aacntgagca cnttttgct 150
 gttgntgnta tacttcacg gggcgggtgat tgcgggacga gatttntata 200
 agattttggg gtgcctngaa gtgcctnta taaagatat taaaaaggcc 250
 tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300
 acaagcccag gagaaattcc aggatattggg tgctgcttat gaggttntgt 350
 cagatagtga gaaacggaaa cagtacgata attatgggtga agaaggatta 400
 aaagatggtn atcagagctc ccatggagac attttttcac acttntttgg 450
 ggattttggt ttcattgttg gaggaacccc tngtcagcaa gacagaaata 500
 ttccaagag 509

<210> 150
 <211> 1532
 <212> DNA
 <213> Homo sapiens

<400> 150
 ggcacgaggg ggcggggcag tcgoggggatg cgccccgggag ccacagcctg 50
 aggcctctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100
 ctcttcccca atttgccact tcacgagct ttagcccatg agggaggtgt 150
 gaccggggact gagtccaggag cctctgtgaa gcattggagac tgtggtgatt 200
 gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250
 ggtgctgtgtg tgcaggcagc gctactgccg gcccgagagc ctgctgcagc 300

gctatgattc taagcccatt gtggacctca ttggtgccat ggagaccag 350
 tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccca 400
 cattgagccc attctggaga atgaagactg gatcgaagat gcctcgggtc 450
 tcatgtccca ctgcattgcc atcttgaaga tttgtcacac tctgacagag 500
 aagcttggtt ccatgacaat gggctctggg gccaaagatga agacttcagc 550
 cagtgtcagc gacatcattg tgggtggcaa gcggatcagc cccagggtgg 600
 atgatgttgt gaagtctgat taccctcctg tggaccccaa actcctggac 650
 gcacggagca ctgcctctgt cctgtctgtc agtcacctgg tgctgggtgac 700
 aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
 tgtcggctgc tgaggagcat ttggaagtcc ttgcagaago agccttagct 800
 tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
 gtctgcaatt tagtgcctac aggccagcag ctagccatga aggccctgc 900
 cgccatccct ggatggctca gcttagcctt ctactttttc ctatagagtt 950
 agttgttctc cacggctgga gagttcagct gtgtgtgcat agtaaagcag 1000
 gagatccccc tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050
 gagtggcagt ctaatactac agttagggga gatgccatto actctctgca 1100
 agaggagtat tgaaaactgg tggactgtca gctttattta gctcacctag 1150
 tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
 taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250
 ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
 tcttcttttg gcaagaattg tactctctca cctggcctgt ttcatttatt 1350
 tgtattatct gcctgggtccc tgaggcgtct ggtctctctc tctcccttgc 1400
 aggtttgggt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450
 tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaat 1500
 atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151

<211> 226

<212> PRT

<213> Homo sapiens

<400> 151

Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile
 1 5 10 15

Phe Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg
 20 25 30

Tyr Cys Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro

	35		40		45
Ile Val Asp Leu	Ile Gly Ala Met Glu	Thr Gln Ser Glu Pro Ser			
	50	55	60		
Glu Leu Glu Leu	Asp Asp Val Val Ile	Thr Asn Pro His Ile Glu			
	65	70	75		
Ala Ile Leu Glu	Asn Glu Asp Trp Ile	Glu Asp Ala Ser Gly Leu			
	80	85	90		
Met Ser His Cys	Ile Ala Ile Leu Lys	Ile Cys His Thr Leu Thr			
	95	100	105		
Glu Lys Leu Val	Ala Met Thr Met Gly	Ser Gly Ala Lys Met Lys			
	110	115	120		
Thr Ser Ala Ser	Val Ser Asp Ile Ile	Val Val Ala Lys Arg Ile			
	125	130	135		
Ser Pro Arg Val	Asp Asp Val Val Lys	Ser Met Tyr Pro Pro Leu			
	140	145	150		
Asp Pro Lys Leu	Leu Asp Ala Arg Thr	Thr Ala Leu Leu Leu Ser			
	155	160	165		
Val Ser His Leu	Val Leu Val Thr Arg	Asn Ala Cys His Leu Thr			
	170	175	180		
Gly Gly Leu Asp	Trp Ile Asp Gln Ser	Leu Ser Ala Ala Glu Glu			
	185	190	195		
His Leu Glu Val	Leu Arg Glu Ala Ala	Leu Ala Ser Glu Pro Asp			
	200	205	210		
Lys Gly Leu Pro	Gly Pro Glu Gly Phe	Leu Gln Glu Gln Ser Ala			
	215	220	225		
Ile					

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
 gcttcatttc tcccgaactca ggtcccccacc ctgggctttc cgaggtgctt 50
 tcgccgtgt cccaccact gcagccatga tctctttaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttcttttg 150
 aatgattctc ttttttgaca aagcaactact ggctattgga aatgttttat 200
 ttgtagccgg ctgggctttt gtaattgggt tagaagaagc attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca gggttttttc tgggtggtgt 300

attttagtc cttattgggtt ggcctttgat aggcattgat ttcgaaattt 350
 atggattttt tctcttggtc agggggttctt ttctgtctgt tgttggtt 400
 attagaagag tgccagtcct tggatccctc ctaaatttac ctggaattag 450
 atcattttgta gataaagttg gagaagcaa caatatggta taacaacaag 500
 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
 agaattattca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
 tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650
 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
 caagcaact gagagagggtg aaatccatgt taatgatgct taagaaactc 750
 ttgaaggcta tttgtgttgt tttccacaa tgtgcgaaac tcagccatcc 800
 tttagaact gtggtgcctg tttcttttct tttatttttg aaggctcagg 850
 agcatccata ggcatttgc ttttagaagt gtccactgca atggcaaaaa 900
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgattgga 950
 ttgtgtcatt ttaaagtatt aaaaccaagg aaacccaat tttgatgtat 1000
 ggattacttt tttttngcn cagggcc 1027

<210> 153
 <211> 138
 <212> PRT
 <213> Homo sapiens

<220>
 <221> N-myristoylation Sites
 <222> 11-16, 51-56 and 116-121
 <223> N-myristoylation Sites.

<220>
 <221> Transmembrane domains
 <222> 12-30, 33-52, 69-89 and 93-109
 <223> Transmembrane domains

<220>
 <221> Aminoacyl-transfer RNA Synthetases.
 <222> 49-59
 <223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153
 Met Ile Ser Leu Thr Asp Thr Gln Lys Ile Gly Met Gly Leu Thr
 1 5 10 15
 Gly Phe Gly Val Phe Phe Leu Phe Phe Gly Met Ile Leu Phe Phe
 20 25 30
 Asp Lys Ala Leu Leu Ala Ile Gly Asn Val Leu Phe Val Ala Gly
 35 40 45
 Leu Ala Phe Val Ile Gly Leu Glu Arg Thr Phe Arg Phe Phe Phe
 50 55 60

Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val
65 75

Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu
80 85 90

Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val
95 100 105

Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn
110 115 120

Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn
125 130 135

Asn Met Val

<210> 154
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 66
<223> unknown base

<400> 154
gaagacgtgg cggctctcgc ctgggctgtt tcccggttc atttctccc 50
actcagcttc ccacntggg ctttcgagg tgctttgcgc gctgtcccca 100
ccactgcagc catgatctcc ttaacggaca cgcagaaaa tggaatggga 150
ttaaccggat ttggagtgtt tttcctgttc ttgggaatga ttctcttttt 200
tgacaaagca ctactggcta ttggaaatgt tttatttgta gcggcgttgg 250
cttttggta tggtttagaa agaacattca gattcttctt ccaaaaacat 300
aaaatgaaag ctacaggttt tttctgggtt ggtgtatttg tagtccttat 350
tggttgccct ttgataggca tgatcttoga aatttatgga tttttctct 400
tggtc 405

<210> 155
<211> 1781
<212> DNA
<213> Homo sapiens

<400> 155
ggcagaggc tgaaccagc cggctccatc tcagcttctg gtttctaagt 50
ccatgtgcc aaggctgcc ggaaggagac gccttoctga gtctggatc 100
tttcttctct ctggaaatct ttgactgtgg gtagttattt atttctgaat 150
aagagcgtcc acgcatcatg gacctcgcg gactgctgaa gtctcagttc 200
ctgtgccacc tggcttctct ctacgtcttt attgcctcag ggctaatcat 250

caacaccatt cagctcttca ctctctctct ctggcccatt aacaagcagc 300
 tcttcocgaa gatcaactgc agactgtcct attgcatctc aagccagctg 350
 gtgatgtgc tggagtgggt gtcgggcacg gaatgcacca tcttcacgga 400
 cccgcgcgcc tacctcaagt atgggaagga aaatgccatc gtggtttctca 450
 accacaagtt tgaattgac tttctgtgtg gctggagcct gtccgaacgc 500
 tttgggtctg tagggggctc caaggtcctg gccaaagaa agctggccta 550
 tgtcccaatt atcggctgga tgtgttactt caccgagatg gtcttctgtt 600
 cgcgcaagt ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650
 ctccgggact accccgagaa gtatttttct ctgattcact gtgagggcac 700
 acggttcacg gagaagaagc atgagatcag catgcagggt gcccgggcca 750
 aggggtctgc tcgcctcaag catcacctgt tggcacgaac caagggtctc 800
 gccatcacgc tgaggagctt gaaaaatgta gtttcagctg tatatgactg 850
 tacactcaat ttcagaaata atgaaaatcc aacactgctg ggagtcttaa 900
 acggaaagaa ataccatgca gatttgtatg ttaggaggat cccactggaa 950
 gacatccctg aagacgatga cagtgctcgc gcctggctgc aacagctcta 1000
 ccaggagaag gatgccttct agggaggagta ctacaggacg ggcaccttcc 1050
 cagagacgcc catggtgccc ccccgccggc cctggaccct cgtgaactgg 1100
 ctgttttggg cctcgtcgtt gctctaccct ttcttccagt tcttggtcag 1150
 catgatcagg agcgggtctt cctgacgctt ggccagcttc atcctcgtct 1200
 tcttttggtc ctccgtggga gttcgtatga tgattggtgt gacggaatt 1250
 gacaagggtc ctgcctacgg caactctgac agcaagcaga aactgaatga 1300
 ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggtgg 1350
 cctctgcata tcctccttag tgggacacgg tgacaaaggc tgggtgagcc 1400
 cctgctgggc acggcggaag tcacgacctc tcacgccagg gagtctggtc 1450
 tcaaggccgg atggggagga agatgttttg taatcttttt tccccatgt 1500
 gcttttagtg gctttggttt tctttttgtg cagtggtgtg tgagaatggc 1550
 tgtgtggtga gtgtgaactt tgttctgtga tcatagaaa ggatattttag 1600
 gctgcagggg agggcagggc tggggaccga aggggacaa tcccccttct 1650
 atcctttggt gctgagtttt ctgtaacctt tggttgccag agataaagt 1700
 aaaagtcttt taggtgagat gactaaatta tgcctccaag aaaaaaaaaa 1750
 taaagtcttt ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu	1	5	10	15
Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr	20	25	30	
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu	35	40	45	
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln	50	55	60	
Leu	Val	Met	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile	65	70	75		
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala	80	85	90	
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly	95	100	105	
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val	110	115	120	
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met	125	130	135	
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln	140	145	150	
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr	155	160	165	
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe	170	175	180	
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys	185	190	195	
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly	200	205	210	
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val	215	220	225	
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu	230	235	240	
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val	245	250	255	
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys	260	265	270	
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln	275	280	285	
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val				

290	295	300
Pro Pro Arg Arg Pro Trp Thr Leu Val	Asn Trp Leu Phe Trp	Ala
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln	Phe Leu Val Ser Met	Ile
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala	Ser Phe Ile Leu Val	Phe
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp	Met Ile Gly Val Thr	Glu
350	355	360
Ile Asp Lys Gly Ser Ala Tyr Gly Asn	Ser Asp Ser Lys Gln	Lys
365	370	375
Leu Asn Asp		

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
 ctgaggcggc ggtagcatgg aggggggagag taogtcggcg gtgctctcgg 50
 gctttgtgct cggcgcactc gctttccagc acctcaacac ggactcggac 100
 acggaaggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150
 tactgattoc caaatggatg atgttgaagt tggtttataca attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcagcg 250
 gaagtaaatg agcaagcact gaagaaaata ttatcaaatg tcaaaaagaa 300
 tgtggtaggt tggtaacaat tccgtcgtca ttcagatcag atcatgacgt 350
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccaa 400
 gacctgtttt ttctgctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatcga ctggaacatt ccttatataa acctcaaaaa ggacttttct 500
 acaggytacc tttagtgtt gccaatctgg gcatgtctga acaactgggt 550
 tataaaactg tatcagggtc ctgtatgtcc actggtttta gccgagcagt 600
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aatgaaatg tatgcttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtgaaga cagtgaacaa gcagttagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaattga gaaaaggaga ggagcacaga 800
 ttcaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850
 tttctttgtc aggcattacg gacctttttt ccaaattctg aatttcttca 900
 ttcattgtgt atgtctttaa aaaatagaca tgtttctaaa agtagctgta 950

actacaacca ccattctgat gtagtagaca atctgacctt aatggtagaa 1000
 cacactgaca ttctgaagc tagtccagct agtacaccac aaatcattaa 1050
 gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggt 1100
 tgttagatag acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150
 caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200
 aaagatgaag ggttttggtg aatattcacg gtctoctaca ttttgatcct 1250
 ttttaacctt caaggagatt tttttatttg gctgatgggt aaagccaaac 1300
 atttctattg tttttactat gttgagctac ttgcagtaag ttcattgttt 1350
 tttactatgt tcacctgttt gcagtaatac acagataact cttagtgcac 1400
 ttacttcaca aagtactttt tcaaacatca gatgctttta tttccaaacc 1450
 tttttttcac ctttacttaa gttgttgagg ggaaggctta cacagacaca 1500
 ttcttttaga ttggaaaagt gagaccaggc acagtggttc acacctgtaa 1550
 tcccagcact tagggaagac aagtcaggag gattgattga agctaggagt 1600
 tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650
 atggaaaagc aagaatagcc ttattttcaa aatatggaaa gaaatttata 1700
 tgaaaattta tctgagtcac taaaattctc ctttaagtac acttttttag 1750
 aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800
 aaatttgcaa aacatoatct aaaattttaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

Met Glu Gly Leu Ser Thr Ser Ala Val Leu Ser Gly Phe Val Leu
 1 5 10 15

Gly Ala Leu Ala Phe Gln His Leu Asn Thr Asp Ser Asp Thr Glu
 20 25 30

Gly Phe Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile
 35 40 45

Thr Asp Ser Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp
 50 55 60

Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn
 65 70 75

Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser
 80 85 90

Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg His
 95 100 105

Ser Asp Gln Ile	Met Thr Phe Arg Glu Arg Leu Leu His Lys Asn	110	120
Leu Gln Glu His	Phe Ser Asn Gln Asp Leu Val Phe Leu Leu Leu	125	135
Thr Pro Ser Ile	Ile Thr Glu Ser Cys Ser Thr His Arg Leu Glu	140	150
His Ser Leu Tyr	Lys Pro Gln Lys Gly Leu Phe His Arg Val Pro	155	165
Leu Val Val Ala	Asn Leu Gly Met Ser Glu Gln Leu Gly Tyr Lys	170	180
Thr Val Ser Gly	Ser Cys Met Ser Thr Gly Phe Ser Arg Ala Val	185	195
Gln Thr His Ser	Ser Lys Phe Phe Glu Glu Asp Gly Ser Leu Lys	200	210
Glu Val His Lys	Ile Asn Glu Met Tyr Ala Ser Leu Gln Glu Glu	215	225
Leu Lys Ser Ile	Cys Lys Lys Val Glu Asp Ser Glu Gln Ala Val	230	240
Asp Lys Leu Val	Lys Asp Val Asn Arg Leu Lys Arg Glu Ile Glu	245	255
Lys Arg Arg Gly	Ala Gln Ile Gln Ala Ala Arg Glu Lys Asn Ile	260	270
Gln Lys Asp Pro	Gln Glu Asn Ile Phe Leu Cys Gln Ala Leu Arg	275	285
Thr Phe Phe Pro	Asn Ser Glu Phe Leu His Ser Cys Val Met Ser	290	300
Leu Lys Asn Arg	His Val Ser Lys Ser Ser Cys Asn Tyr Asn His	305	315
His Leu Asp Val	Val Asp Asn Leu Thr Leu Met Val Glu His Thr	320	330
Asp Ile Pro Glu	Ala Ser Pro Ala Ser Thr Pro Gln Ile Ile Lys	335	345
His Lys Ala Leu	Asp Leu Asp Asp Arg Trp Gln Phe Lys Arg Ser	350	360
Arg Leu Leu Asp	Thr Gln Asp Lys Arg Ser Lys Ala Asn Thr Gly	365	375
Ser Ser Asn Gln	Asp Lys Ala Ser Lys Met Ser Ser Pro Glu Thr	380	390
Asp Glu Glu Ile	Glu Lys Met Lys Gly Phe Gly Glu Tyr Ser Arg	395	405
Ser Pro Thr Phe			

<210> 159
 <211> 2651
 <212> DNA
 <213> Homo sapiens

<400> 159
 ggacacagccg cgcggcggag ggcagagtca gccgagccga gtccagccgg 50
 acgagcggac cagcgcaggg cagcccaagc agcgcgcagc gaacgcccgc 100
 cgcgcgccac accctctgcg gtcccccgcg cgcctgccac ccttccctcc 150
 ttccccgcgt ccccgctcg cggccagtc agcttgcccg gtctgctgcc 200
 ccgcgaaacc cagaggtcac cagcccgcg ctctgcttcc ctgggccgcg 250
 cgcgcctcc acgcctctct tctcccttg cccggcgctt ggcaccgggg 300
 accgttgctt gacgcgaggc ccagctctac ttttcgcccc cgtctctctc 350
 cgcctgctcg cctcttccac caactccaac tccttctccc tccagctcca 400
 ctgctagtc ccgactccg ccagccctcg gcccgctgcc gtacgcgcgc 450
 ttccccctcg gtcccaaagg tgggaacgcg tccgcccccg cccgcacccat 500
 ggacaggttc ggcttgcccg cgttctctcg caccctggca gtgctcagcg 550
 ccgcgctgct ggctgccgag ctcaagtoga aaagtgtctc ggaagtgcga 600
 cgtctttacg tgtccaaagg cttcaacaag aacgatgccc cctccacga 650
 gatcaacggt gatcatttga agatctgtcc ccagggttct acctgtgct 700
 ctcaagagat ggaggagaag tacagcctgc aaagtaaaag tgatttcaaa 750
 agtgtgttca gcgaacagtg caatcatttg caagctgtct ttgcttccag 800
 ttacaagaag tttgatgaat tcttcaaaag actacttgaa aatgcagaga 850
 aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900
 aattctgagc tatttaaaag tctcttcgta gagtgtgaaac gttactacgt 950
 ggtgggaaat gtgaacctgg aagaatgtct aaatgacttc tgggctcgcc 1000
 tcctggagcg gatgttccgc ctggtgaact cccagtacca ctttacagat 1050
 gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100
 agatgtccct cgcaaatga agctccaggt tactcgtgct ttttagcag 1150
 cccgactatt cgtccaaggc tttagcggtt cgggagatgt cgtgacaaag 1200
 gtctcctggt taaacccccc agcccaggtt acccatgccc tgttgaagat 1250
 gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300
 actactgctc aaacatcatg agaggctggt tggccaacca aggggatctc 1350
 gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400
 gctagagggt cctttcaaca ttgaatcggt catggatccc atcgatgtga 1450

agattttctga tgctattatg aacatgcagg ataatagtgt tcaagtgctc 1500
 cagaaggttt tccagggatg tggaccccc aagccccctc cagctggagc 1550
 aattttctcgt tccatctctg aaagtgcctt cagtgtctgc ttcagaccac 1600
 atcaccccca ggaacgcca accacagcag ctggcactag tttggaccga 1650
 ctggttactg atgtcaagga gaaactgaaa caggccaaga aattctggtc 1700
 ctcccttccg agcaacgttt gcaacgatga gaggatggct gcaggaaacg 1750
 gcaatgagga tgaactgttg aatgggaaa gcaaaagcag gtacctgttt 1800
 gcagtgacag gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850
 ggttgacacc agcaaaccag acatactgat ccttcgtcaa atcatggctc 1900
 ttcagatgat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950
 gacttctttg atatcagtga tgaaagtagt ggagaaggaa gtggaagtgg 2000
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050
 atgctgggaa gagtgccaat gagaagccg acagtgtctg tgtccgtcct 2100
 ggggcacagc cctacctcct cactgtcttc tgcatcttgt tctcggttat 2150
 gcagagagag tggagataat tctcaaactc tgagaaaaag tgttcatcaa 2200
 aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250
 tttttaaatg aatggacaac aatgtacagt ttttactatg tggccactgg 2300
 tttaagaagt gctgactttg ttttctcatt cagttttggg aggaaaaggg 2350
 actgtgcatt gagttgggtc ctgctccccc aaaccatggt aaacgtggct 2400
 aacagtgtag gtacagaact atagttagtt gtgcatttgt gattttatca 2450
 ctctattatt tgtttgatg tttttttctc atttcgtttg tgggtttttt 2500
 tttccaaactg tgatctcgcc ttgtttctta caagcaaac agggtcctct 2550
 cttggcagct aacatgtacg tattttctgaa atattaaata gctgtacaga 2600
 agcaggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaag 2650

c 2651

<210> 160

<211> 556

<212> PRT

<213> Homo sapiens

<400> 160

Met	Ala	Arg	Phe	Gly	Leu	Pro	Ala	Leu	Leu	Cys	Thr	Leu	Ala	Val
1					5				10					15
Leu	Ser	Ala	Ala	Leu	Leu	Ala	Ala	Glu	Leu	Lys	Ser	Lys	Ser	Cys
				20					25					30
Ser	Glu	Val	Arg	Arg	Leu	Tyr	Val	Ser	Lys	Gly	Phe	Asn	Lys	Asn

	35		40		45
Asp Ala Pro Leu	His Glu Ile Asn Gly	Asp His Leu Lys Ile Cys			
	50	55	60		
Pro Gln Gly Ser	Thr Cys Cys Ser Gln	Glu Met Glu Glu Lys Tyr			
	65	70	75		
Ser Leu Gln Ser	Lys Asp Asp Phe Lys	Ser Val Val Ser Glu Gln			
	80	85	90		
Cys Asn His Leu	Gln Ala Val Phe Ala	Ser Arg Tyr Lys Lys Phe			
	95	100	105		
Asp Glu Phe Phe	Lys Glu Leu Leu Glu	Asn Ala Glu Lys Ser Leu			
	110	115	120		
Asn Asp Met Phe	Val Lys Thr Tyr Gly	His Leu Tyr Met Gln Asn			
	125	130	135		
Ser Glu Leu Phe	Lys Asp Leu Phe Val	Glu Leu Lys Arg Tyr Tyr			
	140	145	150		
Val Val Gly Asn	Val Asn Leu Glu Glu	Met Leu Asn Asp Phe Trp			
	155	160	165		
Ala Arg Leu Leu	Glu Arg Met Phe Arg	Leu Val Asn Ser Gln Tyr			
	170	175	180		
His Phe Thr Asp	Glu Tyr Leu Glu Cys	Val Ser Lys Tyr Thr Glu			
	185	190	195		
Gln Leu Lys Pro	Phe Gly Asp Val Pro	Arg Lys Leu Lys Leu Gln			
	200	205	210		
Val Thr Arg Ala	Phe Val Ala Ala Arg	Thr Phe Ala Gln Gly Leu			
	215	220	225		
Ala Val Ala Gly	Asp Val Val Ser Lys	Val Ser Val Val Asn Pro			
	230	235	240		
Thr Ala Gln Cys	Thr His Ala Leu Leu	Lys Met Ile Tyr Cys Ser			
	245	250	255		
His Cys Arg Gly	Leu Val Thr Val Lys	Pro Cys Tyr Asn Tyr Cys			
	260	265	270		
Ser Asn Ile Met	Arg Gly Cys Leu Ala	Asn Gln Gly Asp Leu Asp			
	275	280	285		
Phe Glu Trp Asn	Asn Phe Ile Asp Ala	Met Leu Met Val Ala Glu			
	290	295	300		
Arg Leu Glu Gly	Pro Phe Asn Ile Glu	Ser Val Met Asp Pro Ile			
	305	310	315		
Asp Val Lys Ile	Ser Asp Ala Ile Met	Asn Met Gln Asp Asn Ser			
	320	325	330		
Val Gln Val Ser	Gln Lys Val Phe Gln	Gly Cys Gly Pro Pro Lys			
	335	340	345		
Pro Leu Pro Ala	Gly Arg Ile Ser Arg	Ser Ile Ser Glu Ser Ala			

350	355	360
Phe Ser Ala Arg	Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr
365	370	375
Thr Ala Ala Gly	Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys
380	385	390
Glu Lys Leu Lys	Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser
395	400	405
Asn Val Cys Asn	Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu
410	415	420
Asp Asp Cys Trp	Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala
425	430	435
Val Thr Gly Asn	Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val
440	445	450
Gln Val Asp Thr	Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile
455	460	465
Met Ala Leu Arg	Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn
470	475	480
Gly Asn Asp Val	Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly
485	490	495
Glu Gly Ser Gly	Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu
500	505	510
Phe Asp Tyr Asn	Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu
515	520	525
Lys Ala Asp Ser	Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu
530	535	540
Leu Thr Val Phe	Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp
545	550	555

Arg

<210> 161
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 161
 ctccgtggta aacccacag ccc 23

 <210> 162
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 162
tcacatcgat gggatccatg accg 24

<210> 163
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 163
ggctctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164
<211> 870
<212> DNA
<213> Homo sapiens

<400> 164
ctgcgcccca aatgggaacg ctggcctggg actaaagcat agaccaccag 50
gctgagtatc ctgacctgag tcatccccag ggatcaggag cctccaggag 100
ggaaccttcc attatattct tcaagcaact tacagctgca cgcagagttg 150
cgatgaaagt tctaattctt tccctcctcc tgttgctgcc actaatgctg 200
atgtccatgg tctctagcag cctgaatcca ggggtcgcca gaggccacag 250
ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300
gtgagtgcga agattggttc ctgagagccc cgagaagaaa attcatgaca 350
gtgtctgggc tgccaaagaa gcagtgcgcc tgtgatcatt tcaaggggca 400
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
ccagagcctg ccagcaattt ctcaacaat gtcagctaag aagctttgct 500
ctgcctttgt aggagctctg agcgcccact cttccaatta aacattctca 550
gccaaagaaga cagtgagcac acctaccaga cactcttctt ctcccacctc 600
actctcccac tgtaccacc cctaatacat tccagtgtc tcacaaaagca 650
tgtttttcaa gatcattttg ttgttgctc tctctagtgt cttcttctct 700
cgctagctct agcctgtgcc ctccccttac ccaggcttag gcttaattac 750
ctgaaagatt ccaggaaact gtagcttctt agctagtgtc atttaacctt 800
aaatgcaatc aggaagtag caaacagaag tcaataataa tttttaaatg 850
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
<211> 119
<212> PRT
<213> Homo sapiens

<400> 165
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met	Val Ser Ser Ser	Leu Asn Pro Gly	Val Ala Arg
	20	25	30
Gly His Arg Asp	Arg Gly Gln Ala	Ser Arg Arg Trp	Leu Gln Glu
	35	40	45
Gly Gly Gln Glu	Cys Glu Cys Lys	Asp Trp Phe Leu	Arg Ala Pro
	50	55	60
Arg Arg Lys Phe	Met Thr Val Ser	Gly Leu Pro Lys	Lys Gln Cys
	65	70	75
Pro Cys Asp His	Phe Lys Gly Asn	Val Lys Lys Thr	Arg His Gln
	80	85	90
Arg His His Arg	Lys Pro Asn Lys	His Ser Arg Ala	Cys Gln Gln
	95	100	105
Phe Leu Lys Gln	Cys Gln Leu Arg	Ser Phe Ala Leu	Pro Leu
	110	115	

<210> 166

<211> 551

<212> DNA

<213> Homo sapiens

<400> 166

aatggctgtc ttagtacttc gctgacagt tgtctctggga ctgcttgtct 50

tattctctgac ctgctatgca gacgacaaac cagacaagcc agacagacaag 100

ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150

cctcctgggc acagagatca ttgagaatgc agtcgagttc atctccgcgt 200

ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250

cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300

tccaagagca gccaaatcct gcttttccag ttgggtcca caagtcctcc 350

aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400

tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450

ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500

agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550

a 551

<210> 167

<211> 87

<212> PRT

<213> Homo sapiens

<400> 167

Met Ala Val Leu	Val Leu Arg Leu	Thr Val Val Leu	Gly Leu Leu
1	5	10	15
Val Leu Phe Leu	Thr Cys Tyr Ala	Asp Asp Lys Pro	Asp Lys Pro

20	25	30
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe		
35	40	45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala		
50	55	60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met		
65	70	75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys		
80	85	

<210> 168

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 168

ggacgccagc gcctgcagag gctgagcagg gaaaaagcca gtgccccagc 50

ggaagcacag ctcagagctg gctgtccatg gacatcctgg tccactcct 100

gcagctgctg gtgctgcttc ttacctgcc cctgcacctc atggctctgc 150

tgggtctgct gcagcccctg tgcaaaagct acttccccta cctgatggcc 200

gtgctgactc ccaagagcaa cgcgaagatg gagagcaaga aacgggagct 250

cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300

tggagctggg ctgcggaacc ggagccaact ttcagtctta cccaccgggc 350

tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400

aaagagcatg gctgagaaca ggcacctcca atatgagcgg tttgtggtgg 450

ctcctggaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500

gtctgcactc tgggtgctgt ctctgtgcag agcccaagga aggtcctgca 550

ggaggtccgg agagtactga gaccgggagg tgtgtctttt ttctgggagc 600

atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650

gagcccacct ggaaacacat tggggatggc tgctgcctca ccagagagac 700

ctggaaggat cttgagaacg ccagttcttc cgaatccaa atggaacgac 750

agccccctcc cttgaagtgg ctacctgttg ggcaccacat catgggaaag 800

gctgtcaaac aatctttccc aagctccaag gcactcattt gctccttccc 850

cagcctccaa ttagaacaag ccaccacca gctatctat cttoactga 900

gagggacctc gcagaatgag agaagacatt catgtaccac ctactagtcc 950

ctctctcccc aacctctgcc agggcaatct ctaactcaa tcccgccttc 1000

gacagtgaaa aagctctact tctacgctga ccagggagg aaacactagg 1050

acctgttgtt atctcaact gcaagtttct ggactagtct cccaacgttt 1100

gcctcccaat gttgtccctt tcttcgttc ccatggtaaa gctcctctcg 1150
 ctttctctct gaggtacac ccatgctgtc ctaggaaactg gtcacaaaag 1200
 tcatggtgcc tgcacccctg ccaagccccc ctgacctct ctccccacta 1250
 ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300
 atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350
 taataaatag acgaaccac g 1371

<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

Met	Asp	Ile	Leu	Val	Pro	Leu	Leu	Gln	Leu	Leu	Val	Leu	Leu	Leu	15
1				5					10						
Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro	30
				20					25						
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro	45
				35					40						
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser	60
				50					55						
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu	75
				65					70						
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro	90
				80					85						
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys	105
				95					100						
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu	120
				110					115						
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp	135
				125					130						
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val	150
				140					145						
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg	165
				155					160						
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr	180
				170					175						
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp	195
				185					190						
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys	210
				200					205						
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln	225
				215					220						

Pro Pro Pro Leu Lys Trp Leu Pro Val Gly Pro His Ile Met Gly
 230 235 240

Lys Ala Val Lys Gln Ser Phe Pro Ser Ser Lys Ala Leu Ile Cys
 245 250 255

Ser Phe Pro Ser Leu Gln Leu Glu Gln Ala Thr His Gln Pro Ile
 260 265 270

Tyr Leu Pro Leu Arg Gly Thr
 275

<210> 170

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 170

gtgggattta tttgagtgc agatcgtttt ctcaagtgtg gtggaagtgtg 50

cctcatcgca ggcagatgtt ggggctttgt ccgaacagct cccctctgcc 100

agcttctgtga gataagggtt aaaaactaat atttatatga cagaagaaaa 150

agatgtcatt ccgtaaaagta aacatcatca tcttggtcct gcgtgttgtc 200

ctcttcttac tggttttgca ccataacttc ctcaagtgtg gcagtttgtt 250

aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300

ttgtcccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350

cctgtgtgca tcgctgcac tgaagacagg cttggggggg ccattgcagc 400

tataaacagc attcagcaca acaactcgctc caatgtgatt ttctacattg 450

ttactctcaa caatacagca gaccatctcc ggtcctggct caacagtgtat 500

tcctgaaaa gcatcagata caaaattgtc aattttgacc cttaaactttt 550

ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600

taacctttgc aaggttctac ttgccaatte tgggtccag cgcaaagaag 650

gccatataca tggatgatga tgtaattgtg caagggtgata ttcttgccct 700

ttacaataca gcactgaagc caggacatgc agctgcattt tcagaagatt 750

gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800

aattacattg gctatcttga ctataaaaag gaaagaatc gtaagcttct 850

catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaac 900

tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950

aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000

cacaacacct cctctgttta tcgtatttta tcaacagcac tctaccatcg 1050

atcctatgtg gaatgtccgc caccttggtt ccagtgtctg aaaacgatat 1100

tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaatgggt 1200
 atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250
 atctcaaaac taaagtgaac cagaatttga actgtaagca agcattttctc 1300
 aggaagtctct ggaagatagc atgcatggga agtaacagtt gctaggcttc 1350
 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400
 atgacaaact gccctgtctg gcagtcagct tccagacag actatagaact 1450
 ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500
 aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550
 taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gcctgatctg 1600
 taaataaaac ttacattttt c 1621

<210> 171
 <211> 371
 <212> PRT
 <213> Homo sapiens

<400> 171
 Met Ser Phe Arg Lys Val Asn Ile Ile Ile Leu Val Leu Ala Val
 1 5 10 15
 Ala Leu Phe Leu Leu Val Leu His His Asn Phe Leu Ser Leu Ser
 20 25 30
 Ser Leu Leu Arg Asn Glu Val Thr Asp Ser Gly Ile Val Gly Pro
 35 40 45
 Gln Pro Ile Asp Phe Val Pro Asn Ala Leu Arg His Ala Val Asp
 50 55 60
 Gly Arg Gln Glu Glu Ile Pro Val Val Ile Ala Ala Ser Glu Asp
 65 70 75
 Arg Leu Gly Gly Ala Ile Ala Ala Ile Asn Ser Ile Gln His Asn
 80 85 90
 Thr Arg Ser Asn Val Ile Phe Tyr Ile Val Thr Leu Asn Asn Thr
 95 100 105
 Ala Asp His Leu Arg Ser Trp Leu Asn Ser Asp Ser Leu Lys Ser
 110 115 120
 Ile Arg Tyr Lys Ile Val Asn Phe Asp Pro Lys Leu Leu Glu Gly
 125 130 135
 Lys Val Lys Glu Asp Pro Asp Gln Gly Glu Ser Met Lys Pro Leu
 140 145 150
 Thr Phe Ala Arg Phe Tyr Leu Pro Ile Leu Val Pro Ser Ala Lys
 155 160 165
 Lys Ala Ile Tyr Met Asp Asp Asp Val Ile Val Gln Gly Asp Ile
 170 175 180
 Leu Ala Leu Tyr Asn Thr Ala Leu Lys Pro Gly His Ala Ala Ala

185	190	195
Phe Ser Glu Asp Cys Asp Ser Ala Ser	Thr Lys Val Val Ile Arg	
200	205	210
Gly Ala Gly Asn Gln Tyr Asn Tyr Ile	Gly Tyr Leu Asp Tyr Lys	
215	220	225
Lys Glu Arg Ile Arg Lys Leu Ser Met	Lys Ala Ser Thr Cys Ser	
230	235	240
Phe Asn Pro Gly Val Phe Val Ala Asn	Leu Thr Glu Trp Lys Arg	
245	250	255
Gln Asn Ile Thr Asn Gln Leu Glu Lys	Trp Met Lys Leu Asn Val	
260	265	270
Glu Glu Gly Leu Tyr Ser Arg Thr Leu	Ala Gly Ser Ile Thr Thr	
275	280	285
Pro Pro Leu Leu Ile Val Phe Tyr Gln	Gln His Ser Thr Ile Asp	
290	295	300
Pro Met Trp Asn Val Arg His Leu Gly	Ser Ser Ala Gly Lys Arg	
305	310	315
Tyr Ser Pro Gln Phe Val Lys Ala Ala	Lys Leu Leu His Trp Asn	
320	325	330
Gly His Leu Lys Pro Trp Gly Arg Thr	Ala Ser Tyr Thr Asp Val	
335	340	345
Trp Glu Lys Trp Tyr Ile Pro Asp Pro	Thr Gly Lys Phe Asn Leu	
350	355	360
Ile Arg Arg Tyr Thr Glu Ile Ser Asn	Ile Lys	
365	370	

<210> 172

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 71, 76, 86, 91, 162, 220, 269, 281

<223> unknown base

<400> 172

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catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200
gcattcagca caacactcgn tccaatgtga ttttctacat tgttactctc 250
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<210> 173

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 173

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<210> 174
 <211> 823
 <212> DNA
 <213> Homo sapiens

<400> 174
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 gtcattggggg cagccatctc ccagggggcc ctcatcgcca tcgtctgcaa 200
 cggctctcgtg ggcttcttgc tgctgctgct ctgggtcctc ctctgctggg 250
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<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

Met	Gly	Ala	Ala	Ile	Ser	Gln	Gly	Ala	Leu	Ile	Ala	Ile	Val	Cys
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Asn	Gly	Leu	Val	Gly	Phe	Leu	Leu	Leu	Leu	Leu	Trp	Val	Ile	Leu
				20					25					30

Cys	Trp	Ala	Cys	His	Ser	Arg	Leu	Pro	Thr	Leu	Thr	Leu	Ser	Leu
				35					40					45

Asn	Pro	Val	Pro	Thr	Pro	Ala	Leu	Ala	Pro	Val	Leu	Arg	Arg	Pro
				50					55					60

His	His	Pro	Arg	Ser	Pro	Ala	Met	Lys	Ala	Ala	Thr	Cys	Cys	Ser
				65					70					75

Pro	Glu	Gly	Pro	Trp	Pro	Ser	Leu	Glu	Pro	Arg	Thr
				80					85		

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

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tgccctcaa acacctgagt gctactccct atttgcattt gttttgataa 150

atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200

gatacaatcc ttggcctgtg tatcctcgca ttagccttgt ctttggccat 250

gatgtttacc ttcagattca tcaccacctt tctgggtcac attttcattt 300

cattggttat ttggggattg ttgtttgtct gcggtgtttt atggtggctg 350

tattatgact ataccaacga cctcagcata gaattggaca cagaaggaga 400

aaatatgaag tgcgtgctgg ggtttgcatt cgtatccaca ggcatacagg 450

cagtgtcgtc cgtcttgatt ttgtttctca gaaagagaat aaaattgaca 500

gttgagcttt tccaaatcac aaataaagcc atcagcagtg ctcccttctc 550

gctgttccag ccactgtgga catttgccat cctcattttc ttctgggtcc 600

tctgggtggc tgtgtcgtcg agcctgggaa ctgcaggagc tgcccagggt 650

atggaaggcg gccaaagtga atataagccc ctttcgggca ttccggtacat 700

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<210> 177

<211> 445

<212> PRT

<213> Homo sapiens

<400> 177

Met	Ser	Gly	Arg	Thr	Ile	Leu	Gly	Leu	Cys	Ile	Leu	Ala	Leu
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			20					25					30
Leu	Leu	Val	His	Ile	Phe	Ile	Ser	Leu	Val	Ile	Leu	Gly	Leu
			35					40					45
Phe	Val	Cys	Gly	Val	Leu	Trp	Trp	Leu	Tyr	Tyr	Asp	Tyr	Thr
			50					55					60
Asp	Leu	Ser	Ile	Glu	Leu	Asp	Thr	Glu	Arg	Glu	Asn	Met	Lys
			65					70					75
Val	Leu	Gly	Phe	Ala	Ile	Val	Ser	Thr	Gly	Ile	Thr	Ala	Val
			80					85					90
Leu	Val	Leu	Ile	Phe	Val	Leu	Arg	Lys	Arg	Ile	Lys	Leu	Thr

	410		415		420
Asn Asn Ala Arg	Ala Gln Gln Asp Lys	His Ser Leu Arg Asn Glu			
	425		430		435
Glu Gly Thr Glu	Leu Gln Ala Ile Val Arg				
	440		445		

<210> 178
 <211> 2773
 <212> DNA
 <213> Homo sapiens

<400> 178
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<210> 179

<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

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Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr
				20					25					30
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn
				35					40					45
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val
				50					55					60
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly
				65					70					75
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val
				80					85					90
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg
				95					100					105
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly
				110					115					120
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val
				125					130					135
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu
				140					145					150
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr
				155					160					165
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln
				170					175					180
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala
				185					190					195
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr
				200					205					210
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu
				215					220					225
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg
				230					235					240
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala
				245					250					255
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val
				260					265					270
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu
				275					280					285
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly

	290		295		300
Ser Thr Ser Ile	Gly Lys Arg Arg Phe	Arg Ile Gln Lys Gln Leu			
	305		310		315
Leu Ala Asp Val	Ala Gln Ala Leu Asp	Ile Gly Pro Ala Gly Pro			
	320		325		330
Leu Met Gly Val	Val Gln Tyr Gly Asp	Asn Pro Ala Thr His Phe			
	335		340		345
Asn Leu Lys Thr	His Thr Asn Ser Arg	Asp Leu Lys Thr Ala Ile			
	350		355		360
Glu Lys Ile Thr	Gln Arg Gly Gly Leu	Ser Asn Val Gly Arg Ala			
	365		370		375
Ile Ser Phe Val	Thr Lys Asn Phe Phe	Ser Lys Ala Asn Gly Asn			
	380		385		390
Arg Ser Gly Ala	Pro Asn Val Val Val	Val Met Val Asp Gly Trp			
	395		400		405
Pro Thr Asp Lys	Val Glu Glu Ala Ser	Arg Leu Ala Arg Glu Ser			
	410		415		420
Gly Ile Asn Ile	Phe Phe Ile Thr Ile	Glu Gly Ala Ala Glu Asn			
	425		430		435
Glu Lys Gln Tyr	Val Val Glu Pro Asn	Phe Ala Asn Lys Ala Val			
	440		445		450
Cys Arg Thr Asn	Gly Phe Tyr Ser Leu	His Val Gln Ser Trp Phe			
	455		460		465
Gly Leu His Lys	Thr Leu Gln Pro Leu	Val Lys Arg Val Cys Asp			
	470		475		480
Thr Asp Arg Leu	Ala Cys Ser Lys Thr	Cys Leu Asn Ser Ala Asp			
	485		490		495
Ile Gly Phe Val	Ile Asp Gly Ser Ser	Ser Val Gly Thr Gly Asn			
	500		505		510
Phe Arg Thr Val	Leu Gln Phe Val Thr	Asn Leu Thr Lys Glu Phe			
	515		520		525
Glu Ile Ser Asp	Thr Asp Thr Arg Ile	Gly Ala Val Gln Tyr Thr			
	530		535		540
Tyr Glu Gln Arg	Leu Glu Phe Gly Phe	Asp Lys Tyr Ser Ser Lys			
	545		550		555
Pro Asp Ile Leu	Asn Ala Ile Lys Arg	Val Gly Tyr Trp Ser Gly			
	560		565		570
Gly Thr Ser Thr	Gly Ala Ala Ile Asn	Phe Ala Leu Glu Gln Leu			
	575		580		585
Phe Lys Lys Ser	Lys Pro Asn Lys Arg	Lys Leu Met Ile Leu Ile			
	590		595		600
Thr Asp Gly Arg	Ser Tyr Asp Asp Val	Arg Ile Pro Ala Met Ala			

605	610	615
Ala His Leu Lys	Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp
620	625	630
Ala Ala Gln Glu	Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg
635	640	645
Asp His Ser Phe	Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr
650	655	660
Val Pro Arg Ile	Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln
665	670	675

Pro Arg Asn

<210> 180
 <211> 1759
 <212> DNA
 <213> Homo sapiens

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 aacaaacatt cgagtggtag gaggactcct gtctgctcat ctgctctoca 350
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 cagatgtaca aggggactgt gtccatgcca gtcttcagat ccttgagggc 900
 ctactggcct ggtcttcaga gcctcattgg agacattgac aatgccatga 950
 ggaccttcct caactactac actgtatgga agcagtttgg ggggctcccg 1000

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050
 cccacttcgg ccagaactta ttgaaagcgc aatgtacctc tacogtgcca 1100
 cgggggagtc caccctccta gaactcggaa gagatgctgt ggaatccatt 1150
 gaaaaaatca gcaaggtgga gtgcgggattt gcaacaatca aagatctgcg 1200
 agaccacaag ctggacaacc gcatggagtc gttcttctcg gccgagactg 1250
 tgaataacct ctacctctcg ttgacccaa ccaacttcac ccacaacaat 1300
 ggggtccacct tcgacgcggt gatcaccccc tatggggagt gcatcctggg 1350
 ggctgggggg tacatcttca acacagaagc tcaccccatc gaccttgccg 1400
 cctgcactg ctgccagagg ctgaaggaag agcagtgagg ggtggaggac 1450
 ttgatgaggg aattctactc tctcaaacgg agcaggtcga aatttcagaa 1500
 aaacactggt agttcggggc catgggaacc tccagcaagg ccaggaaacac 1550
 tcttctcacc agaaaacat gaccaggcaa gggagaggaa gcctgccaaa 1600
 cagaaggtcc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650
 ggcattactg ggacagggtt tcctagactc ctcataacca ctggataatt 1700
 tttttatttt ttttttttg aggcataaact ataataaatt gcttttggtc 1750
 atcataaaa 1759

<210> 181

<211> 541

<212> PRT

<213> Homo sapiens

<400> 181

Met	Pro	Phe	Arg	Leu	Leu	Ile	Pro	Leu	Gly	Leu	Leu	Cys	Ala	Leu
1				5					10					15
Leu	Pro	Gln	His	His	Gly	Ala	Pro	Gly	Pro	Asp	Gly	Ser	Ala	Pro
				20					25					30
Asp	Pro	Ala	His	Tyr	Ser	Phe	Ser	Leu	Thr	Leu	Ile	Asp	Ala	Leu
				35					40					45
Asp	Thr	Leu	Leu	Ile	Leu	Gly	Asn	Val	Ser	Glu	Phe	Gln	Arg	Val
				50					55					60
Val	Glu	Val	Leu	Gln	Asp	Ser	Val	Asp	Phe	Asp	Ile	Asp	Val	Asn
				65					70					75
Ala	Ser	Val	Phe	Glu	Thr	Asn	Ile	Arg	Val	Val	Gly	Gly	Leu	Leu
				80					85					90
Ser	Ala	His	Leu	Leu	Ser	Lys	Lys	Ala	Gly	Val	Glu	Val	Glu	Ala
				95					100					105
Gly	Trp	Pro	Cys	Ser	Gly	Pro	Leu	Leu	Arg	Met	Ala	Glu	Glu	Ala
				110					115					120
Ala	Arg	Lys	Leu	Leu	Pro	Ala	Phe	Gln	Thr	Pro	Thr	Gly	Met	Pro

	125		130		135
Tyr Gly Thr Val	Asn Leu Leu His Gly Val	Asn Pro Gly Glu Thr			
	140	145			150
Pro Val Thr Cys	Thr Ala Gly Ile Gly Thr Phe Ile Val Glu Phe				
	155	160			165
Ala Thr Leu Ser	Ser Leu Thr Gly Asp Pro Val Phe Glu Asp Val				
	170	175			180
Ala Arg Val Ala	Leu Met Arg Leu Trp Glu Ser Arg Ser Asp Ile				
	185	190			195
Gly Leu Val Gly	Asn His Ile Asp Val Leu Thr Gly Lys Trp Val				
	200	205			210
Ala Gln Asp Ala	Gly Ile Gly Ala Gly Val Asp Ser Tyr Phe Glu				
	215	220			225
Tyr Leu Val Lys	Gly Ala Ile Leu Leu Gln Asp Lys Lys Leu Met				
	230	235			240
Ala Met Phe Leu	Glu Tyr Asn Lys Ala Ile Arg Asn Tyr Thr Arg				
	245	250			255
Phe Asp Asp Trp	Tyr Leu Trp Val Gln Met Tyr Lys Gly Thr Val				
	260	265			270
Ser Met Pro Val	Phe Gln Ser Leu Glu Ala Tyr Trp Pro Gly Leu				
	275	280			285
Gln Ser Leu Ile	Gly Asp Ile Asp Asn Ala Met Arg Thr Phe Leu				
	290	295			300
Asn Tyr Tyr Thr	Val Trp Lys Gln Phe Gly Gly Leu Pro Glu Phe				
	305	310			315
Tyr Asn Ile Pro	Gln Gly Tyr Thr Val Glu Lys Arg Glu Gly Tyr				
	320	325			330
Pro Leu Arg Pro	Glu Leu Ile Glu Ser Ala Met Tyr Leu Tyr Arg				
	335	340			345
Ala Thr Gly Asp	Pro Thr Leu Leu Glu Leu Gly Arg Asp Ala Val				
	350	355			360
Glu Ser Ile Glu	Lys Ile Ser Lys Val Glu Cys Gly Phe Ala Thr				
	365	370			375
Ile Lys Asp Leu	Arg Asp His Lys Leu Asp Asn Arg Met Glu Ser				
	380	385			390
Phe Phe Leu Ala	Glu Thr Val Lys Tyr Leu Tyr Leu Leu Phe Asp				
	395	400			405
Pro Thr Asn Phe	Ile His Asn Asn Gly Ser Thr Phe Asp Ala Val				
	410	415			420
Ile Thr Pro Tyr	Gly Glu Cys Ile Leu Gly Ala Gly Gly Tyr Ile				
	425	430			435
Phe Asn Thr Glu	Ala His Pro Ile Asp Leu Ala Ala Leu His Cys				

440	445	450
Cys Gln Arg Leu Lys Glu Glu Gln Trp Glu Val Glu Asp Leu Met		
455	460	465
Arg Glu Phe Tyr Ser Leu Lys Arg Ser Arg Ser Lys Phe Gln Lys		
470	475	480
Asn Thr Val Ser Ser Gly Pro Trp Glu Pro Pro Ala Arg Pro Gly		
485	490	495
Thr Leu Phe Ser Pro Glu Asn His Asp Gln Ala Arg Glu Arg Lys		
500	505	510
Pro Ala Lys Gln Lys Val Pro Leu Leu Ser Cys Pro Ser Gln Pro		
515	520	525
Phe Thr Ser Lys Leu Ala Leu Leu Gly Gln Val Phe Leu Asp Ser		
530	535	540

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
 aaagttaacat tttctctgga actctcctag gccactccct gctgatgcaa 50
 catctggggtt tgggcagaaa ggagggtgct tcggagcccg ccctttctga 100
 gcttcctcggg ccggctctag aacaattcag gcttcgctgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatttt ggaaagaaac aatgttctag gtcaaaactga gtctacaaaa 250
 tgcagacttt cacaatggtt ctagaagaaa tctggacaag tctttctatg 300
 tggttttttt acgcattgat tccatgtttg ctcacagatg aagtggccat 350
 tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tcttgatgtg gagcccaagt atcgccctg gagaacagat gtactattct 450
 gtccaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500
 ccccgacagc tgggtgctac tcaactgaag toctgagtgt gatgtcactg 550
 atgacatcac ggccactgtg ccatacaacc ttogtgtcag ggccacattg 600
 ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650
 ctcaaccatc cttaccgcag ctgggatgga gatcaccaaa gatggcttcc 700
 acctggttat tgagctggag gacctggggc cccagtttga gttccttgtg 750
 gcctactgga ggaggagacc tgggtccgag gaacatgtca aaatggtgag 800
 gactgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttcgtgaagg ccattgggag gtacagcgcc 900
 ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca ttccctgtgt 950
 actggccctt ttgaccttg ttggttcat gctgatcctt gtggtcgtgc 1000
 cactgttcgt ctggaaaatg ggccggctgc tccagtactc ctgttcccc 1050
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 aatcagctgc agaagggagg aggtggatgc ctgtgccacg gctgtgatgt 1150
 ctctcaggag actcctcagg gcctggatct cataggtttg cggaaagggc 1200
 caggtgaagc cgagaacctg gtctgcatga catggaacc atgaggggac 1250
 aagtgtgtt tctgttttc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgtt tctacaagtc tagaagcaac catcagaggc aggtgtgtt 1350
 gtctaacaga aactgactg aggttaggg gatgtgacct ctgactggg 1400
 ggctgccact tgcgtgtga gcaaccctgg gaaaagtgc ttcatcctt 1450
 cggtctaa ttttctcct tgtaatggg gaattacct caccctgct 1500
 aaacacacac acacagatc tctctctata tatacacacg tacacataa 1550
 tacaccagc acttgcaagg ctgaggggaa actggtgaca ctctacatc 1600
 tgaactgatt agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac tctacacact gggtggcttg gagagccac tttccagaa 1700
 taatccttga gagaaaagga atcattggg caatggtgtt gaggctactt 1750
 caagcccaat gccgtgcag aggggaatg cttagcgagc totacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgtccttt tttctgttg taaagtacag 2000
 aattcagcaa ataaaaaggg ccacctggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183

<211> 311

<212> PRT

<213> Homo sapiens

<220>

<221> Signal peptide

<222> 1-29

<223> Signal peptide

<220>

<221> N-glycosylation sites

<222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu
1				5					10					15

Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp
				20					25					30

Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
				35					40					45

Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro
				50					55					60

Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu
				65					70					75

Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser
				80					85					90

Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala
				95					100					105

Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln
				110					115					120

Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser
				125					130					135

Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe
				140					145					150

His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe
				155					160					165

Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val
				170					175					180

Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met
				185					190					195

Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys
				200					205					210

Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu
				215					220					225

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe
				230					235					240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp
				245					250					255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val
				260					265					270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile
				275					280					285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met
				290					295					300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser				
				305					310					

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
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 tagacctcag ctccaacata tgcattctga agaagatgg ctgagatgac 150
 agaatgcttt attttgaaa gaaacaatgt tctaggtcac actgagtcta 200
 ccaaatgcag acttccacaa tggttctaga agaaatctgg acaagtcttt 250
 tcatgtggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300
 gccattctgc ctgcccccca gaacctctct gtactctcaa ccaacatgaa 350
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400
 attctgtcga ataccagggg gagtacgaga gcctgtacac gagccacatc 450
 tggatcccca gcagctgggt ctcactcact gaaggtcctg agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caaccttgt gtcagggcca 550
 cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600
 agaaaactca ccatccttac ccgacctggg atggagatca ccaaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagtccc 700
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750
 gaaccacctg cggccgctgg ggtatctctc gagaaaagag agggccaata 800
 tgaccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
ttctacgca ttgattccat gttgtctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggacgcgtg ggccgccacc tccggaacaa gccatggttg cggcgacggt 50
ggcagcggcg tggtgtctcc tgtgggtctg gccctgcgcg cagcaggagc 100
aggacttcta cgaactcaag gcggtcaaca tccggggcaa actggtgtctg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccagc cctgcagcag ctgcagcgag 250
acctgggccc ccaccacttt aacgtgctcg ccttccctcg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgcccgccg 350
caoctacagt gtctcattcc ccatgtttag caagattgca gtcaccggta 400
ctgggtgccca tctgtccttc aagtacctgg cccagacttc ttgggaaggag 450
cccacctgga acttctggaa gtacctagta gcccagatg gaaaggtggt 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga cccagatca 550
cagcgtctgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tctccacca cctcatcccg ccacactgtg tggggctgac 650
 caatgcaaac tcaaatggtg cttcaaaggg agagaccoc tgactctcct 700
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750
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 aatgagagct cttgaccagt gaatcaccag cggatacgaa cgtcttgcca 850
 acaaaaatgt gtggcaaata gaagtatatc aagcaataat ctcccaccca 900
 aggccttctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950
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 aggcattcaa tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaagggtta gttgtgtgta tttcctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taaaaaatgaa agtatcctcc tcaaaaa 1227

<210> 189
 <211> 187
 <212> PRT
 <213> Homo sapiens

<400> 189
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 Ala Ala Cys Ala Gln Gln Glu Gln Asp Phe Tyr Asp Phe Lys Ala 30
 20 25
 Val Asn Ile Arg Gly Lys Leu Val Ser Leu Glu Lys Tyr Arg Gly 45
 35 40 45
 Ser Val Ser Leu Val Val Asn Val Ala Ser Glu Cys Gly Phe Thr 60
 50 55 60
 Asp Gln His Tyr Arg Ala Leu Gln Gln Leu Gln Arg Asp Leu Gly 75
 65 70 75
 Pro His His Phe Asn Val Leu Ala Phe Pro Cys Asn Gln Phe Gly 90
 80 85 90
 Gln Gln Glu Pro Asp Ser Asn Lys Glu Ile Glu Ser Phe Ala Arg 105
 95 100 105
 Arg Thr Tyr Ser Val Ser Phe Pro Met Phe Ser Lys Ile Ala Val 120
 110 115 120
 Thr Gly Thr Gly Ala His Pro Ala Phe Lys Tyr Leu Ala Gln Thr 135
 125 130 135
 Ser Gly Lys Glu Pro Thr Trp Asn Phe Trp Lys Tyr Leu Val Ala 150
 140 145 150
 Pro Asp Gly Lys Val Val Gly Ala Trp Asp Pro Thr Val Ser Val

Glu Glu Val Arg Pro Gln Ile Thr Ala Leu Val Arg Lys Leu Ile
170 175 180

Leu Leu Lys Arg Glu Asp Leu
185

<210> 190

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 190

gcaggacttc tacgacttca aggc 24

<210> 191

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 191

agttctgggcc aggtacttga aggc 24

<210> 192

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 192

caacatccgg ggcaaaactgg tctcgctgga gaagtaccgc ggatcgggtg 50

<210> 193

<211> 2187

<212> DNA

<213> Homo sapiens

<400> 193

cggacgcgtg ggccggccgg gacgcagggc aaagcgagcc atggctgtct 50

acgtcgggat gctgcgcctg gggaggtgt gcgccgggag ctccgggggtg 100

ctggggggccc gggccgccct ctctcgagtg tggcaggaag ccaggttgca 150

gggtgtccgc ttctcagtt ccagagaggt ggatcgcatg gtctccacgc 200

ccatcggagg cctcagctac gttcagggtt gcacacaaaa gcattctaac 250

agcaagactg tgggccagtg cctggagacc acagcacaga gggteccaga 300

acgagaggcc ttggtcgtcc tccatgaaga cgtcaggttg acctttgcc 350

aactcaagga ggaggtggac aaagctgctt ctggcctcct gagcattggc 400

ctctgcaaaag gtgaccggct gggcatgtgg ggacctaact cctatgcatg 450
 ggtgctcatg cagttggcca cggcccaggc gggcatcatt ctggtgtctg 500
 tgaaccagc ctaccaggct atggaactgg agtatgtcct caagaagggt 550
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 caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650
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 gcccttttc cggggacct gctcctggat gaagtgggtg cggctggcag 750
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 aagggggcca ccctctccca ctacaacatt gtacaacatt ccaacatttt 900
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 tggcaagaag gcaactggagg ccatcagcag agagagaggc accttctgt 1100
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 agctgaacac gccgggggag ctgtgcatcc gaggtactg cgctatgctg 1450
 ggctactggg gtgagcctca gaagacagag gaagcagtgg atcaggacaa 1500
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 agtgacaggt gtgggagtga aggacgatcg gatgggggaa gagatttgtg 1700
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 gtttgtcaca aactaccccc tcaccatttc aggaagatc cagaatttca 1850
 aacttcgaga gcagatggaa gcacatctaa atctgtgaat aaagcagcag 1900
 gcctgtcctg gccggttggc ttgactctct cctgtcagaa tgcaacctgg 1950
 ctttatgcac ctatagttcc ccagcaccca gttctgagcc aggcacatca 2000

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
 aactgcgcctg ggcacaaggt gccaaaaggc aggcagcctg cccaggccct 2100
 cctcctctgtc catccccac attccctctgt ctgtccttgt gatttgccat 2150
 aaagagcttc tgttttcttt gaaaaaaaa aaaaaaa 2187

<210> 194
 <211> 615
 <212> PRT
 <213> Homo sapiens

<400> 194

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Gly	Ser	Ser	Gly	Val	Leu	Gly	Ala	Arg	Ala	Ala	Leu	Ser	Arg	Ser	20	25	30	
Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg	35	40	45	
Glu	Val	Asp	Arg	Met	Val	Ser	Thr	Pro	Ile	Gly	Gly	Leu	Ser	Tyr	50	55	60	
Val	Gln	Gly	Cys	Thr	Lys	Lys	His	Leu	Asn	Ser	Lys	Thr	Val	Gly	65	70	75	
Gln	Cys	Leu	Glu	Thr	Thr	Ala	Gln	Arg	Val	Pro	Glu	Arg	Glu	Ala	80	85	90	
Leu	Val	Val	Leu	His	Glu	Asp	Val	Arg	Leu	Thr	Phe	Ala	Gln	Leu	95	100	105	
Lys	Glu	Glu	Val	Asp	Lys	Ala	Ala	Ser	Gly	Leu	Leu	Ser	Ile	Gly	110	115	120	
Leu	Cys	Lys	Gly	Asp	Arg	Leu	Gly	Met	Trp	Gly	Pro	Asn	Ser	Tyr	125	130	135	
Ala	Trp	Val	Leu	Met	Gln	Leu	Ala	Thr	Ala	Gln	Ala	Gly	Ile	Ile	140	145	150	
Leu	Val	Ser	Val	Asn	Pro	Ala	Tyr	Gln	Ala	Met	Glu	Leu	Glu	Tyr	155	160	165	
Val	Leu	Lys	Lys	Val	Gly	Cys	Lys	Ala	Leu	Val	Phe	Pro	Lys	Gln	170	175	180	
Phe	Lys	Thr	Gln	Gln	Tyr	Tyr	Asn	Val	Leu	Lys	Gln	Ile	Cys	Pro	185	190	195	
Glu	Val	Glu	Asn	Ala	Gln	Pro	Gly	Ala	Leu	Lys	Ser	Gln	Arg	Leu	200	205	210	
Pro	Asp	Leu	Thr	Thr	Val	Ile	Ser	Val	Asp	Ala	Pro	Leu	Pro	Gly	215	220	225	
Thr	Leu	Leu	Leu	Asp	Glu	Val	Val	Ala	Ala	Gly	Ser	Thr	Arg	Gln	230	235	240	
His	Leu	Asp	Gln	Leu	Gln	Tyr	Asn	Gln	Gln	Phe	Leu	Ser	Cys	His				

245	250	255
Asp Pro Ile Asn Ile Gln Phe Thr Ser	Gly Thr Thr Gly Ser Pro	
260	265	270
Lys Gly Ala Thr Leu Ser His Tyr Asn	Ile Val Asn Asn Ser Asn	
275	280	285
Ile Leu Gly Glu Arg Leu Lys Leu His	Glu Lys Thr Pro Glu Gln	
290	295	300
Leu Arg Met Ile Leu Pro Asn Pro Leu	Tyr His Cys Leu Gly Ser	
305	310	315
Val Ala Gly Thr Met Met Cys Leu Met	Tyr Gly Ala Thr Leu Ile	
320	325	330
Leu Ala Ser Pro Ile Phe Asn Gly Lys	Lys Ala Leu Glu Ala Ile	
335	340	345
Ser Arg Glu Arg Gly Thr Phe Leu Tyr	Gly Thr Pro Thr Met Phe	
350	355	360
Val Asp Ile Leu Asn Gln Pro Asp Phe	Ser Ser Tyr Asp Ile Ser	
365	370	375
Thr Met Cys Gly Gly Val Ile Ala Gly	Ser Pro Ala Pro Pro Glu	
380	385	390
Leu Ile Arg Ala Ile Ile Asn Lys Ile	Asn Met Lys Asp Leu Val	
395	400	405
Val Ala Tyr Gly Thr Thr Glu Asn Ser	Pro Val Thr Phe Ala His	
410	415	420
Phe Pro Glu Asp Thr Val Glu Gln Lys	Ala Glu Ser Val Gly Arg	
425	430	435
Ile Met Pro His Thr Glu Ala Arg Ile	Met Asn Met Glu Ala Gly	
440	445	450
Thr Leu Ala Lys Leu Asn Thr Pro Gly	Glu Leu Cys Ile Arg Gly	
455	460	465
Tyr Cys Val Met Leu Gly Tyr Trp Gly	Glu Pro Gln Lys Thr Glu	
470	475	480
Glu Ala Val Asp Gln Asp Lys Trp Tyr	Trp Thr Gly Asp Val Ala	
485	490	495
Thr Met Asn Glu Gln Gly Phe Cys Lys	Ile Val Gly Arg Ser Lys	
500	505	510
Asp Met Ile Ile Arg Gly Gly Glu Asn	Ile Tyr Pro Ala Glu Leu	
515	520	525
Glu Asp Phe Phe His Thr His Pro Lys	Val Gln Glu Val Gln Val	
530	535	540
Val Gly Val Lys Asp Asp Arg Met Gly	Glu Glu Ile Cys Ala Cys	
545	550	555
Ile Arg Leu Lys Asp Gly Glu Glu Thr	Thr Val Glu Glu Ile Lys	

560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His	Phe Lys Ile Pro Lys Tyr	
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu	Thr Ile Ser Gly Lys Ile	
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met	Glu Arg His Leu Asn Leu	
605	610	615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
 caactccaac attttaggag agcgccctgaa actgcatgag aagacaccag 50
 agcagttgctg gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccaccc tcatcctggc 150
 ctctcccatc ttcaatggca agaaggaact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt acccccacga tgctcgtgga cattctgaac 250
 cagccagact tctccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaaag 450
 cgtgggcaga attatgcctc acacggaggc gcggatcatg aacatggagg 500
 cagggacgct ggcaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgcgtca tgctgggcta ctgggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtggg attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
 gagcaggacg gagccatgga ccccgccagg aaagcaggtg ccagggccat 50
 gatctggact gcaggctggc tgctgctgct gctgcttcgc ggaggagcgc 100
 aggcocctgga gtgctacagc tgcgtgcaga aagcagatga cggatgctcc 150
 ccgaacaaga tgaagacagt gaagtgcgcg ccggggcgtgg acgtctgcac 200
 cgaggccgtg ggggcggtgg agaccatcca cggacaattc togtggcgag 250
 tgcgggggtg cgggttcggga ctccccgca agaatgaccg cggcctggat 300
 ctccacgggc ttctggcggt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac ccggcaggta 400
 atgagagtgc ataccgcccc aacggcgctgg agtgctacag ctgtgtgggc 450
 ctgagccggg aggcgtgccca gggtagatcg ccgcccgtcg tgagctgcta 500
 caacgccagc gatcatgtct acaagggctg ctcgacggc aacgtcacct 550
 tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
 gatgaattct gcaactcggga tggagtaaca ggcccagggt tcacgctcag 650
 tggctcctgt tgocagggggt ccgctgtaa ctctgacctc cgcaacaaga 700
 cctacttctc ccctcgaatc ccaccccttg tccggctgcc ccctccagag 750
 cccacgactg tggcctcaac cacatctgtc accacttcta cctcgcccc 800
 agtgagaccc acatccacca ccaaaccat gccagcgcca accagtcaga 850
 ctcgagaca gggagtagaa cagaggcct cccgggatga ggagccagg 900
 ttgactggag gcgcccgtgg ccaccaggac cgcagcaatt cagggcagta 950
 tcctgcaaaa ggggggcccc agcagcccca taataaaggc tgtgtggctc 1000
 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgccta 1050
 ctgtgagctt ctccacctgg aaatttccct ctcacctact tctctggccc 1100
 tgggtacccc tcttctcctc acttctgtt cccaccactg gactgggctg 1150
 gccacgcccc tgtttttcca acattcccca gtatccccag cttctgctgc 1200
 gctggtttgc gcttttggga aataaaatac cggtgtatat attctgccag 1250
 ggggtgttcta gctttttgag gacagctcct gtatccttct catccttgc 1300
 tctccgcttg tcctcttgtg atgttaggac agagtgcagag aagtcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gcttcctact caatttctcc 1400
 tagccagcct ggactttgga gcgtgggggt ggtgggacaa tggctcccca 1450
 ctctaagcac tgctccctct actcccgca tcttggggga atcggttccc 1500
 catatgtctt cttactaga ctgtgagctc ctcgaggggg ggcccggtag 1550
 ccaattcgcc ctatagtgc togta 1575

<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

Met	Asp	Pro	Ala	Arg	Lys	Ala	Gly	Ala	Gln	Ala	Met	Ile	Trp	Thr
1					5				10					15
Ala	Gly	Trp	Leu	Leu	Leu	Leu	Leu	Leu	Arg	Gly	Gly	Ala	Gln	Ala
			20						25				30	
Leu	Glu	Cys	Tyr	Ser	Cys	Val	Gln	Lys	Ala	Asp	Asp	Gly	Cys	Ser

	35	40	45
Pro Asn Lys Met	Lys Thr Val Lys Cys	Ala Pro Gly Val Asp Val	
	50	55	60
Cys Thr Glu Ala	Val Gly Ala Val Glu Thr	Ile His Gly Gln Phe	
	65	70	75
Ser Leu Ala Val	Arg Gly Cys Gly Ser	Gly Leu Pro Gly Lys Asn	
	80	85	90
Asp Arg Gly Leu	Asp Leu His Gly Leu	Leu Ala Phe Ile Gln Leu	
	95	100	105
Gln Gln Cys Ala	Gln Asp Arg Cys Asn	Ala Lys Leu Asn Leu Thr	
	110	115	120
Ser Arg Ala Leu	Asp Pro Ala Gly Asn	Glu Ser Ala Tyr Pro Pro	
	125	130	135
Asn Gly Val Glu	Cys Tyr Ser Cys Val	Gly Leu Ser Arg Glu Ala	
	140	145	150
Cys Gln Gly Thr	Ser Pro Pro Val Val	Ser Cys Tyr Asn Ala Ser	
	155	160	165
Asp His Val Tyr	Lys Gly Cys Phe Asp	Gly Asn Val Thr Leu Thr	
	170	175	180
Ala Ala Asn Val	Thr Val Ser Leu Pro	Val Arg Gly Cys Val Gln	
	185	190	195
Asp Glu Phe Cys	Thr Arg Asp Gly Val	Thr Gly Pro Gly Phe Thr	
	200	205	210
Leu Ser Gly Ser	Cys Cys Gln Gly Ser	Arg Cys Asn Ser Asp Leu	
	215	220	225
Arg Asn Lys Thr	Tyr Phe Ser Pro Arg	Ile Pro Pro Leu Val Arg	
	230	235	240
Leu Pro Pro Pro	Glu Pro Thr Thr Val	Ala Ser Thr Thr Ser Val	
	245	250	255
Thr Thr Ser Thr	Ser Ala Pro Val Arg	Pro Thr Ser Thr Thr Lys	
	260	265	270
Pro Met Pro Ala	Pro Thr Ser Gln Thr	Pro Arg Gln Gly Val Glu	
	275	280	285
His Glu Ala Ser	Arg Asp Glu Glu Pro	Arg Leu Thr Gly Gly Ala	
	290	295	300
Ala Gly His Gln	Asp Arg Ser Asn Ser	Gly Gln Tyr Pro Ala Lys	
	305	310	315
Gly Gly Pro Gln	Gln Pro His Asn Lys	Gly Cys Val Ala Pro Thr	
	320	325	330
Ala Gly Leu Ala	Ala Leu Leu Leu Ala	Val Ala Ala Gly Val Leu	
	335	340	345

Leu

<210> 198
 <211> 1657
 <212> DNA
 <213> Homo sapiens

<400> 198
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 acgccatgga gttggtgctg gtcttctctc gcagcctgct ggcccccatg 100
 gtctcggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
 tgattaccag accctgagga ttgggggact ggtgttctgt gtggtcctct 200
 tctcggttgg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtctc 250
 aatcagaagc cccgggcccc aggagatgag gaagcccagg tggagaacct 300
 catcacccgc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350
 catcaggtag aagcctctgg aacctgaggc ggctgcttga accttgggat 400
 gcaaatgtcg atgcttaaga aaaccggcca ctcagcaacc agccctttcc 450
 ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacc 500
 cattctccca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
 gcggctcctg ccacctcccg tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
 gtgtgtgttt gctaactgtg gtctttgtgg ctacttgttt ttggatggta 650
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 cacatggcca tctgtctctc cctgcccccg tggccctcca tcaacctctg 750
 ctctaggagg gctgcttggt gcccgagacc agccccctcc cctgatttag 800
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 tgggaagggt tgcagcactt tgtcatcatt cttcatggac tcctttcact 900
 cctttaacaa aaaccttgct tccttatccc acctgatccc agtetgaagg 950
 tctcttagca actggagata caaagcaagg agctgggtgag cccagcgttg 1000
 acgtcaggca ggctatgcc ttccgtgggt aatttcttc caggggcttc 1050
 cacgaggagt ccccatctgc cccgccctt cacagagcgc cgggggattc 1100
 caggcccagg gcttctactc tgccccctgg gaatgtgtcc cctgcatatc 1150
 ttctcagcaa taactccatg ggctctggga cctaccacct tccaaccttc 1200
 cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250
 cagtcctctg aattgggtct ctggcaggca atagttgaag gactcctgtt 1300
 ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350
 cttctctgcc tacgtccctt tagatgggca gcagaggcaa ctcccgcac 1400

cttctgctctg cctgtcgggtg gtcagagcggg tgagcagaggt gggttggaga 1450
 ctcagcaggc tccgtgcagc ccttggaac agtgagaggt tgaaggcat 1500
 aacgagagtg ggaactcaac ccagatccc cccctcctgt cctctgtgtt 1550
 cccgcggaaa ccaaccaaac cgtgcgtgt gacccattgc tgttctctgt 1600
 atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatacttt 1650
 gtttcct 1657

<210> 199
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 199
 Met Glu Leu Val Leu Val Phe Leu Cys Ser Leu Leu Ala Pro Met
 1 5 10 15
 Val Leu Ala Ser Ala Ala Glu Lys Glu Lys Glu Met Asp Pro Phe
 20 25 30
 His Tyr Asp Tyr Gln Thr Leu Arg Ile Gly Gly Leu Val Phe Ala
 35 40 45
 Val Val Leu Phe Ser Val Gly Ile Leu Leu Ile Leu Ser Arg Arg
 50 55 60
 Cys Lys Cys Ser Phe Asn Gln Lys Pro Arg Ala Pro Gly Asp Glu
 65 70 75
 Glu Ala Gln Val Glu Asn Leu Ile Thr Ala Asn Ala Thr Glu Pro
 80 85 90
 Gln Lys Gln Arg Thr Glu Val Gln Pro Ser Gly Gly Ser Leu Trp
 95 100 105
 Asn Leu Arg Arg Leu Leu Glu Pro Leu Asp Ala Asn Val Asp Ala
 110 115 120

<210> 200
 <211> 415
 <212> DNA
 <213> Homo sapiens

<400> 200
 aaacttgacg ccatgaagat cccgttcctt cctgccgtgg tgctcctctc 50
 cctcctgggtg ctccactctg cccaggagc caccctgggt ggtcctgagg 100
 aagaaagcac catgagaat tatgcgtcac gaccggaggc ctttaacacc 150
 ccgttctcga acatcgacaa attgcgatct gcgtttaagg ctgatgagtt 200
 cctgaactgg caagccctct ttgagtctat caaaaggaaa cttcctttcc 250
 tcaactggga tgcttttctt aagctgaaag gactgaggag cgcaactcct 300
 gatgccagat gacctgacc tccactggaa gagggggcta gcgtgagcgc 350
 tgattctcaa cctaccataa ctctttcctg cctcaggaac tccaataaaa 400

catatttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu
1 5 10 15

Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu
20 25 30

Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
35 40 45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
50 55 60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
65 70 75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly
80 85 90

Leu Arg Ser Ala Thr Pro Asp Ala Gln
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50

ggtggagatt gcotttgcct cagtgattct cacctgcctc tccctctctg 100

cagcaggagt ctcccaggtt gttcttctcc agccagttcc aactcaggag 150

acaggtccca aggccatggg agatctctcc tgtggctttg ccggccactc 200

atgagagtgt ttttgtgtaa agtatctttt agaatactgt tgacttcttc 250

atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300

tcaacctca aatttttggt atactagatg gcttccattt acccaccact 350

attttaaggt ccctttattt ttaggttcaa ggttcatttg acttgagaaa 400

gtgcctcttc gcagcttcat tgattttggt tatcttcaact attaattgta 450

acgattaaaa aagaataaga gcacgcagac ctctaggaga atattttatc 500

cctgggtgcc cctgacacat ttatgtagtg atcccacaaa tgtgattggt 550

aatttaaatg ttatttctaat attagtacat tcagttgtga tgtaatatga 600

ataaccagaa totatttctt aaaagttttg agtatatttt tcaactagat 650

atttgtatag aaagactgaa tagtgatg 678

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
 ggggaatctg cagtaggtct gccggcgatg gagtgggtgg ctagctcgcc 50
 gcttcggctc tggctgctgt tgttctcct gccctcagcg cagggccgcc 100
 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgcata gaagaggatc taactccttt ccgaggagcg atctccagga 250
 agatgatggc agaggtagtc agacggaagc tagggacca ctatcagatc 300
 actaagaaca gactgtaccg ggaaaatgac tgcattgtcc cctcaagggt 350
 tagtgggtgt gagcacttta ttttggaggt gatcgggctg ctccctgaca 400
 tggagatggg gatcaatgta cgagattatc ctcagggttc taaatggatg 450
 gagcctgccca tccagtcctt ctctctcagt aagacatcag agtaccatga 500
 tatcatgtat cctgcttgga cattttggga agggggacct gctgtttggc 550
 caatttatcc tacaggctctt ggacggtggg acctcttcag agaagatctg 600
 gtaaggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
 ttttcogagga tcaaggacaa gtccagaacg agatctctc attctctgt 700
 ctcggaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaaagatac cttaggaaag ccagctgcta aggatgtcca 800
 tcttgggat cactgcaaat acaagtatct gtttaatttt cgaggcgtag 850
 ctgcaagttt ccggtttaaa cactctcttc tgtgtggctc actgttttc 900
 catgttggtg atgagtggct agaattcttc tatccacagc tgaagccatg 950
 ggttcaactat atccagtc aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaa at gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatattgcag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagtg aatactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattatc ccaaaatgtt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtcct ctttgtggca acagatctca 1250
 gatatcctac ggtgagaagc ttaccataag cttggctcct ataccttgaa 1300
 tatctgctat caagccaaat acctgggttt ccttatcatg ctgacccag 1350
 agcaactctt gagaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt ttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaacccaac tctaccttc attttcttaa gaccaatcac agcttggtcc 1500
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg ccctttgtcc cattatttgg agcagaaaat tcgtcatttg 1600
 gaagtagtac aactcattgc tggaaattgt aaattattca aggcgtgac 1650
 tctgtcactt tattttaatg taggaaaccc tatggggttt atgaaaaata 1700
 cttggggatc attctctgaa tggctaaagg aagcggtagc catgccatgc 1750
 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800
 gggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850
 caattggatt tcagggtccc tttttgtgcc ttcatgccct acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205

<211> 392

<212> PRT

<213> Homo sapiens

<400> 205

Met	Glu	Trp	Trp	Ala	Ser	Ser	Pro	Leu	Arg	Leu	Trp	Leu	Leu	Leu
1				5					10					15
Phe	Leu	Leu	Pro	Ser	Ala	Gln	Gly	Arg	Gln	Lys	Glu	Ser	Gly	Ser
			20						25					30
Lys	Trp	Lys	Val	Phe	Ile	Asp	Gln	Ile	Asn	Arg	Ser	Leu	Glu	Asn
			35						40					45
Tyr	Glu	Pro	Cys	Ser	Ser	Gln	Asn	Cys	Ser	Cys	Tyr	His	Gly	Val
			50						55					60
Ile	Glu	Glu	Asp	Leu	Thr	Pro	Phe	Arg	Gly	Gly	Ile	Ser	Arg	Lys
			65						70					75
Met	Met	Ala	Glu	Val	Val	Arg	Arg	Lys	Leu	Gly	Thr	His	Tyr	Gln
			80						85					90
Ile	Thr	Lys	Asn	Arg	Leu	Tyr	Arg	Glu	Asn	Asp	Cys	Met	Phe	Pro

95										100										105									
Ser	Arg	Cys	Ser	Gly	Val	Glu	His	Phe	Ile	Leu	Glu	Val	Ile	Gly															
				110					115					120															
Arg	Leu	Pro	Asp	Met	Glu	Met	Val	Ile	Asn	Val	Arg	Asp	Tyr	Pro															
				125					130					135															
Gln	Val	Pro	Lys	Trp	Met	Glu	Pro	Ala	Ile	Pro	Val	Phe	Ser	Phe															
				140					145					150															
Ser	Lys	Thr	Ser	Glu	Tyr	His	Asp	Ile	Met	Tyr	Pro	Ala	Trp	Thr															
				155					160					165															
Phe	Trp	Glu	Gly	Gly	Pro	Ala	Val	Trp	Pro	Ile	Tyr	Pro	Thr	Gly															
				170					175					180															
Leu	Gly	Arg	Trp	Asp	Leu	Phe	Arg	Glu	Asp	Leu	Val	Arg	Ser	Ala															
				185					190					195															
Ala	Gln	Trp	Pro	Trp	Lys	Lys	Lys	Asn	Ser	Thr	Ala	Tyr	Phe	Arg															
				200					205					210															
Gly	Ser	Arg	Thr	Ser	Pro	Glu	Arg	Asp	Pro	Leu	Ile	Leu	Leu	Ser															
				215					220					225															
Arg	Lys	Asn	Pro	Lys	Leu	Val	Asp	Ala	Glu	Tyr	Thr	Lys	Asn	Gln															
				230					235					240															
Ala	Trp	Lys	Ser	Met	Lys	Asp	Thr	Leu	Gly	Lys	Pro	Ala	Ala	Lys															
				245					250					255															
Asp	Val	His	Leu	Val	Asp	His	Cys	Lys	Tyr	Lys	Tyr	Leu	Phe	Asn															
				260					265					270															
Phe	Arg	Gly	Val	Ala	Ala	Ser	Phe	Arg	Phe	Lys	His	Leu	Phe	Leu															
				275					280					285															
Cys	Gly	Ser	Leu	Val	Phe	His	Val	Gly	Asp	Glu	Trp	Leu	Glu	Phe															
				290					295					300															
Phe	Tyr	Pro	Gln	Leu	Lys	Pro	Trp	Val	His	Tyr	Ile	Pro	Val	Lys															
				305					310					315															
Thr	Asp	Leu	Ser	Asn	Val	Gln	Glu	Leu	Leu	Gln	Phe	Val	Lys	Ala															
				320					325					330															
Asn	Asp	Asp	Val	Ala	Gln	Glu	Ile	Ala	Glu	Arg	Gly	Ser	Gln	Phe															
				335					340					345															
Ile	Arg	Asn	His	Leu	Gln	Met	Asp	Asp	Ile	Thr	Cys	Tyr	Trp	Glu															
				350					355					360															
Asn	Leu	Leu	Ser	Glu	Tyr	Ser	Lys	Phe	Leu	Ser	Tyr	Asn	Val	Thr															
				365					370					375															
Arg	Arg	Lys	Gly	Tyr	Asp	Gln	Ile	Ile	Pro	Lys	Met	Leu	Lys	Thr															
				380					385					390															

Glu Leu

<210> 206

<211> 1425
 <212> DNA
 <213> Homo sapiens

<400> 206
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 ttacotccc ttogcccaact tcttgaggag atcccgaggt ctggtggtcc 150
 ggatgcccg cagggatggc tggctgccct gcaggaccgc agcatccttg 200
 cccctctggc atgggatctg gggtcctcgc ttctattttg tgggcagcac 250
 agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtactttgg 300
 ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttgacgc 350
 tggatgatcg gtactgggag ccataccca aaggccctgt gttgtgggag 400
 gctcgggctg agccatgggc cactggggtg ccgctcctct gctttgtgct 450
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 aaagtgcagc tttttctaaa aaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe
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Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr
				20					25				30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro
			35						40				45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile
			50						55				60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly
			65						70				75
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr
			80						85				90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys
			95						100				105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile
			110						115				120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala
			125						130				135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp
			140						145				150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu
			155						160				165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu
			170						175				180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His
			185						190				195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val
			200						205				210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Ala	Phe	Leu	Leu	Thr
			215						220				225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu
			230						235				240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser
			245						250				255
Pro	Gln	Asp	Gly	Glu	Ala	Glu							
			260										

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

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caacaaaaaa cttaagcttt aatttcactc ggaattccac agttttctta 200
gtccctctgga ccgggttgac ctgttggtctc ttcccgtctg ctgctctatc 250
acgtgggtct ctccgactac tcaccccgag tgtaaagaac cttcggtctg 300
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350
gagtaggatg tcactgagat cctcacaatg gagcctctg ctgctgtcac 400
tcttgagttt ctttgtgatg tggtaacctc gccttcccca ctacaatgtg 450
atagaacgag tgaactggat gtacttctat gagtatgagc cgatttcacg 500
acaagacttt cacttcacac ttcgagagca ttcaaaactgc tctcatcaaa 550
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600
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tgaggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700
aaatgttggc attgtcctta gaggatgaac accttcttta tgggtgacata 750
atcogacaag atttttttaga cacatataat aacctgacct tgaaaaccat 800
tatggcattc aggtgggtaa ctgagttttg ccccaatgcc aagtaacgta 850
tgaagacaga cactgatgtt ttcacaaata ctggcaattt agtgaagtat 900
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tgataattat tcctatagag gatttttacca aaaaacccat atttcttacc 1000
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agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250
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ataccttgtg gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400
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gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550
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 tttaaaatta cttcaacttt gtgtttttaa atgttttgac gatttcaata 1900
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950
 tacttaactg atcagtttat tattgataca tcaactccatt aatgtaaagt 2000
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 tactgtgta atataagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met	Ala	Ser	Ala	Leu	Trp	Thr	Val	Leu	Pro	Ser	Arg	Met	Ser	Leu	
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Arg	Ser	Leu	Lys	Trp	Ser	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Phe	
				20					25					30	
Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu	
				35					40					45	
Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg	
				50					55					60	
Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His	
				65					70					75	
Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp	
				80					85					90	
Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Trp	Gly	Glu	Lys	Lys		
				95					100					105	
Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln	
				110					115					120	
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp	
				125					130					135	
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp	
				140					145					150	
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp	
				155					160					165	

Val	Thr	Glu	Phe	Cys	Pro	Asn	Ala	Lys	Tyr	Val	Met	Lys	Thr	Asp	
				170					175					180	
Thr	Asp	Val	Phe	Ile	Asn	Thr	Gly	Asn	Leu	Val	Lys	Tyr	Leu	Leu	
				185					190					195	
Asn	Leu	Asn	His	Ser	Glu	Lys	Phe	Phe	Thr	Gly	Tyr	Pro	Leu	Ile	
				200					205					210	
Asp	Asn	Tyr	Ser	Tyr	Arg	Gly	Phe	Tyr	Gln	Lys	Thr	His	Ile	Ser	
				215					220					225	
Tyr	Gln	Glu	Tyr	Pro	Phe	Lys	Val	Phe	Pro	Pro	Tyr	Cys	Ser	Gly	
				230					235					240	
Leu	Gly	Tyr	Ile	Met	Ser	Arg	Asp	Leu	Val	Pro	Arg	Ile	Tyr	Glu	
				245					250					255	
Met	Met	Gly	His	Val	Lys	Pro	Ile	Lys	Phe	Glu	Asp	Val	Tyr	Val	
				260					265					270	
Gly	Ile	Cys	Leu	Asn	Leu	Leu	Lys	Val	Asn	Ile	His	Ile	Pro	Glu	
				275					280					285	
Asp	Thr	Asn	Leu	Phe	Phe	Leu	Tyr	Arg	Ile	His	Leu	Asp	Val	Cys	
				290					295					300	
Gln	Leu	Arg	Arg	Val	Ile	Ala	Ala	His	Gly	Phe	Ser	Ser	Lys	Glu	
				305					310					315	
Ile	Ile	Thr	Phe	Trp	Gln	Val	Met	Leu	Arg	Asn	Thr	Thr	Cys	His	
				320					325					330	

Tyr

<210> 210

<211> 745

<212> DNA

<213> Homo sapiens

<400> 210

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 gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
 gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250
 actotttcaa aagaagacat gcattgtgca caaaatgaac aaggaagtca 300
 tgcctcccat tcaatccctt gatgcaactgg tcaaggaaaa gaagcttcag 350
 ggtaagggac caggaggacc acctcccaag ggctgatgt actcagtcac 400
 cccaaacaaa gtcgatgacc tgagcaagtt cggaaaaaac attgcaacaa 450
 tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500
 ctgttttttt actcaggaac gtgctacacg accagtgtag tatggattgt 550

ggacatttcc ttctgtggag acacggtgga gaactaaca attttttaa 600
 gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
 tccagtggtt ttaccatgt cattctgaaa tttttctcta ctagttatgt 700
 ttgatttctt taagtttcaa taaatcatt tagcattgaa aaaaa 745

<210> 211
 <211> 185
 <212> PRT
 <213> Homo sapiens

<400> 211
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 Ala Pro Ala Leu Ala Asn Tyr Asn Ile Asn Val Asn Asp Asp Asn
 20 25 30
 Asn Asn Ala Gly Ser Gly Gln Gln Ser Val Ser Val Asn Asn Glu
 35 40 45
 His Asn Val Ala Asn Val Asp Asn Asn Asn Gly Trp Asp Ser Trp
 50 55 60
 Asn Ser Ile Trp Asp Tyr Gly Asn Gly Phe Ala Ala Thr Arg Leu
 65 70 75
 Phe Gln Lys Lys Thr Cys Ile Val His Lys Met Asn Lys Glu Val
 80 85 90
 Met Pro Ser Ile Gln Ser Leu Asp Ala Leu Val Lys Glu Lys Lys
 95 100 105
 Leu Gln Gly Lys Gly Pro Gly Gly Pro Pro Lys Gly Leu Met
 110 115 120
 Tyr Ser Val Asn Pro Asn Lys Val Asp Asp Leu Ser Lys Phe Gly
 125 130 135
 Lys Asn Ile Ala Asn Met Cys Arg Gly Ile Pro Thr Tyr Met Ala
 140 145 150
 Glu Glu Met Gln Glu Ala Ser Leu Phe Phe Tyr Ser Gly Thr Cys
 155 160 165
 Tyr Thr Thr Ser Val Leu Trp Ile Val Asp Ile Ser Phe Cys Gly
 170 175 180
 Asp Thr Val Glu Asn
 185

<210> 212
 <211> 1706
 <212> DNA
 <213> Homo sapiens

<400> 212
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 tcctagtatt aaattcttat tgcttactga tttttttgag ttaagagttg 200
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250
 ataaagtaga ttgagtcctc aattttatgt aagcttcaga agaactggtt 300
 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350
 gacagttctc gaaccaatgt gtttgttcga tttcaaccag agactatagc 400
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 aagaacctga ggatagacaa caggcttcca aaagccctta caatggtgta 800
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 ataataggcg gagtcgatct ggaacatata gctcgagatc aagaagcagg 950
 tcccgagctc acagtgaag ccctcgaaga catcataatc atggttctcc 1000
 tcaccttaag gccaaagata ccagagatga tttaaaaagt tcaaacagac 1050
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 gaactatggt aatttttttg cacattaaaa tgccctagca gtatctaatt 1450
 aaaaaccatg gtcagggtca attgtacttt attatagttg tgtattggtt 1500
 attgctataa gaactggagc gtgaattctg taaaaatgta tcttattttt 1550
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 atgatggta atactttctt aacactggtt tgtctgcag tgtaagattt 1650
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aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro
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Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu
				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
				155					160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
				170					175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
				185					190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
				200					205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

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ggattgtaat atgaaattat ttaaaagggc ttgcctcata tataggaaaa 200
tcgcatatgg tcctagtatt aaattnttat tgcttactga ttttttgag 250
ttaagagtgg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300
agaaaaaaga ataaagtaga ttgagtctcc aattttatgt aagcttcaga 350
agaactgggt tgtttacatg caagcttata gttgaaatat ttttcaggaa 400
ttacatgaat gacagtcttc gaaccaatgt gttgttcga tttcaaccag 450
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ccgttgccaa ctngtcccca ttggtttctt ctttttggtg ctacagaaga 550
ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600
agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650
ttacaagaag cnaattaaa agcaaaggga ttgaatccgg atggaactcc 700
agccctttca accctgggtg gattttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

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ccaccctcat gcacaggctg gcgccacact gctccttcgc gcgctggctg 150
ctctgtaacg gcagtttgtt ccgatacaag caccctgtctg aggaggagct 200
tcggggccctg gcggggaagc cgaggcccag aggcaggaaa gaggcgtggg 250
ccaatggcct tagtgaggag aagccactgt ctgtgccccg agatgccccg 300

ttccagctgg agacctgccc cctcacgacc gtggatgccc tggctcctgcg 350
 cttcttctctg gagtaccagt ggtttgtgga ctttgcctgtg tactcgggcg 400
 gcgtgtacct cttcacagag gccactact acatgctggg accagccaag 450
 gagactaaca ttgctgtgtt ctgggtgcctg ctcacgggtga ccttctccat 500
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 atgctgtgcg aagtgggtgc ggaggagacc ctcgagctgg gcctggagcc 650
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 tggctctgga caaagcccat tgcacgggac ttcctgcacc agcgcgcgtt 950
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 gcctctggtt gctgggtgtg ctgtgcctgc tgcggctggc ggtgaccogg 1050
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 gcgaaggagg gctggccgca tcgaagcccg tgaatccag cagagggttg 1150
 tccgagtcta ctgctatgtg accgtgggtg gcttgcagta cctgacgccg 1200
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 atgagggtcc ccaggccatt gtctccgaag cgtatgtgcc aggtttgagt 1750
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 tttttaa 1807

<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

Met	Ala	Val	Leu	Gly	Val	Gln	Leu	Val	Val	Thr	Leu	Leu	Thr	Ala
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Thr	Leu	Met	His	Arg	Leu	Ala	Pro	His	Cys	Ser	Phe	Ala	Arg	Trp
				20					25					30
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu
				35					40					45
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg
				50					55					60
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser
				65					70					75
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr
				80					85					90
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp
				95					100					105
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr
				110					115					120
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile
				125					130					135
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met
				140					145					150
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly
				155					160					165
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu
				170					175					180
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly
				185					190					195
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu
				200					205					210
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu
				215					220					225
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala
				230					235					240
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp
				245					250					255
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu
				260					265					270
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr
				275					280					285
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu

290										295										300									
Thr	Arg	Phe	Ser	Leu	Leu	Ser	Asp	Ser		Ala	Phe	Asp	Ser	Gly	Arg														
				305						310					315														
Leu	Trp	Leu	Leu	Val	Val	Leu	Cys	Leu		Leu	Arg	Leu	Ala	Val	Thr														
				320						325					330														
Arg	Pro	His	Leu	Gln	Ala	Tyr	Leu	Cys		Leu	Ala	Lys	Ala	Arg	Val														
				335						340					345														
Glu	Gln	Leu	Arg	Arg	Glu	Ala	Gly	Arg		Ile	Glu	Ala	Arg	Glu	Ile														
				350						355					360														
Gln	Gln	Arg	Val	Val	Arg	Val	Tyr	Cys		Tyr	Val	Thr	Val	Val	Ser														
				365						370					375														
Leu	Gln	Tyr	Leu	Thr	Pro	Leu	Ile	Leu		Thr	Leu	Asn	Cys	Thr	Leu														
				380						385					390														
Leu	Leu	Lys	Thr	Leu	Gly	Gly	Tyr	Ser		Trp	Gly	Leu	Gly	Pro	Ala														
				395						400					405														
Pro	Leu	Leu	Ser	Pro	Asp	Pro	Ser	Ser		Ala	Ser	Ala	Ala	Pro	Ile														
				410						415					420														
Gly	Ser	Gly	Glu	Asp	Glu	Val	Gln	Gln		Thr	Ala	Ala	Arg	Ile	Ala														
				425						430					435														
Gly	Ala	Leu	Gly	Gly	Leu	Leu	Thr	Pro		Leu	Phe	Leu	Arg	Gly	Val														
				440						445					450														
Leu	Ala	Tyr	Leu	Ile	Trp	Trp	Thr	Ala		Ala	Cys	Gln	Leu	Leu	Ala														
				455						460					465														
Ser	Leu	Phe	Gly	Leu	Tyr	Phe	His	Gln		His	Leu	Ala	Gly	Ser															
				470						475																			

<210> 217
 <211> 574
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 5, 146
 <223> unknown base

<400> 217
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 gctcaactgcc accctcatgc acaggetggc gccacactgc tccttcgcgc 100
 gctggctgct ctgtaacggc agttgtttcc gatacaagca ccggtnttga 150
 ggaggagctt cgggccctgg cggggaagcc gaggcccaga ggcaggaaa 200
 agcgggtggc caatggcctt agtgaggaga agccactgtc tgtgccccga 250
 gatgccccgt tccagctgga gacctgcccc ctacagaccg tggatgccct 300
 ggtcctgcgc ttcttctgg agtaccagtg gtttgtggac tttgctgtgt 350

actcgggcgg cgtgtacctc ttcacagagg cctactacta catgctggga 400
ccagccaagg agactaacat tgctgtgttc tgggtcctgc tcacagtgc 450
cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500
aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttcctg 550
ctgtggcca tgctggtgca agcg 574

<210> 218

<211> 2571

<212> DNA

<213> Homo sapiens

<400> 218

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ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150
ggctggtttg ggcccttgta gctgacagaa ggtggccagg gagaatgcag 200
cacactgctc ggagaatgaa ggcgcttctg ttgctggtct tgcccttgct 250
cagtctctgt aactacattg acaatgtggg caacctgcac ttcctgtatt 300
cagaactctg taaagggtgcc tcccaactac gcctgaccaa agatagggaag 350
aggcgctcac aagatggctg tccagacggc tgtgcgagcg tcacagccac 400
ggctccctcc ccagagggtt ctgcagctgc caccatctct ttaatgacag 450
acgagcctgg cctagacaac cctgcctacg tgtcctcgcg agaggacggg 500
cagccagcaa tcagccaggt ggactctggc cggagcaacc gaactagggc 550
acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600
atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650
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agtctttcca aggttgtaac acctgattcc agatggtgaa attaccagca 750
tcaagatcaa tcgagtagat ccagtgaaa gcctctctat taggctggtg 800
ggaggtagcg aaaccccaact ggtccatctc attatccaa acatttatcg 850
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taaaggatcaa cgggatggac atcagcaatg tccctcacia ctacgctgtg 950
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acagaagtgc cgcagcagga acaatggaca ggccccgatg gcctacagac 1050
cccagatga cagctttcat gtgattctca acaaaagtag ccccgaggag 1100
cagcttgtaa taaaactggt gcgcaagggt gatgagcctg gggttttcat 1150
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agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250
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 cgtcgtgtcc cgccagggtc ggcagcggag ccctgacatc ttccaggagc 1350
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 aacactccca agccctccca tctacaatt acttgtcatg agaaggtggt 1450
 aaatatccaa aaagaccocg gtgaatctct cggtcatgacc gtcgcagggg 1500
 gagcatcaca tagagaatgg gatttgcta tctatgtcat cagtgttgag 1550
 cccggaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600
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 tgtggctgga attaccacgg tgcttgata actgtaaga tattgtatta 1850
 cgaagaacaa cagctggaag tctgggcttc tgcattgtag gaggttatga 1900
 agaatacaat ggaaacaaac cttttttcat caaatccatt gttgaaggaa 1950
 caccagcata caatgatgga agaattagat gtggtgatat tcttcttgc 2000
 gtcaatggta gaagtacatc aggaatgata catgcttgct tggcaagact 2050
 gctgaaagaa cttaaaggaa gaattactct aactattggt tcttgccctg 2100
 gcactttttt atagaatcaa tgatgggtca gaggaaacaa gaaaaatcac 2150
 aaataggcta agaagttgaa acactatatt tatctgtgca gtttttatat 2200
 ttaaagaaag aatacattgt aaaaatgtca ggaaaagtat gatcatctaa 2250
 tgaaagccag ttacacctca gaaaatatga ttccaaaaaa attaaaaacta 2300
 ctagtgtttt ttcagtgtgg aggtattctc attactctac aacattgttt 2350
 atattttttt tattcaataa aaagccctaa aacaactaaa atgattgatt 2400
 tgtatacccc actgaattca agctgattta aatttaaaat ttggtatatg 2450
 ctgaagtctg ccaagggtac attatggcca tttttaattt acagctaaaa 2500
 tatttttttaaatgcattgc tgagaaacgt tgcttttcac aaacaagaat 2550
 aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

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Asn Tyr Ile Asp	Asn Val Gly Asn Leu	His Phe Leu Tyr Ser	Glu 30
	20	25	
Leu Cys Lys Gly	Ala Ser His Tyr Gly	Leu Thr Lys Asp Arg	Lys 45
	35	40	
Arg Arg Ser Gln	Asp Gly Cys Pro Asp	Gly Cys Ala Ser Leu	Thr 60
	50	55	
Ala Thr Ala Pro	Ser Pro Glu Val Ser	Ala Ala Ala Thr Ile	Ser 75
	65	70	
Leu Met Thr Asp	Glu Pro Gly Leu Asp	Asn Pro Ala Tyr Val	Ser 90
	80	85	
Ser Ala Glu Asp	Gly Gln Pro Ala Ile	Ser Pro Val Asp Ser	Gly 105
	95	100	
Arg Ser Asn Arg	Thr Arg Ala Arg Pro	Phe Glu Arg Ser Thr	Ile 120
	110	115	
Arg Ser Arg Ser	Phe Lys Lys Ile Asn	Arg Ala Leu Ser Val	Leu 135
	125	130	
Arg Arg Thr Lys	Ser Gly Ser Ala Val	Ala Asn His Ala Asp	Gln 150
	140	145	
Gly Arg Glu Asn	Ser Glu Asn Thr Thr	Ala Pro Glu Val Phe	Pro 165
	155	160	
Arg Leu Tyr His	Leu Ile Pro Asp Gly	Glu Ile Thr Ser Ile	Lys 180
	170	175	
Ile Asn Arg Val	Asp Pro Ser Glu Ser	Leu Ser Ile Arg Leu	Val 195
	185	190	
Gly Gly Ser Glu	Thr Pro Leu Val His	Ile Ile Ile Gln His	Ile 210
	200	205	
Tyr Arg Asp Gly	Val Ile Ala Arg Asp	Gly Arg Leu Leu Pro	Gly 225
	215	220	
Asp Ile Ile Leu	Lys Val Asn Gly Met	Asp Ile Ser Asn Val	Pro 240
	230	235	
His Asn Tyr Ala	Val Arg Leu Leu Arg	Gln Pro Cys Gln Val	Leu 255
	245	250	
Trp Leu Thr Val	Met Arg Glu Gln Lys	Phe Arg Ser Arg Asn	Asn 270
	260	265	
Gly Gln Ala Pro	Asp Ala Tyr Arg Pro	Arg Asp Asp Ser Phe	His 285
	275	280	
Val Ile Leu Asn	Lys Ser Ser Pro Glu	Glu Gln Leu Gly Ile	Lys 300
	290	295	
Leu Val Arg Lys	Val Asp Glu Pro Gly	Val Phe Ile Phe Asn	Val 315
	305	310	
Leu Asp Gly Gly	Val Ala Tyr Arg His	Gly Gln Leu Glu Glu	Asn

320	325	330
Asp Arg Val Leu	Ala Ile Asn Gly His	Asp Leu Arg Tyr Gly Ser
335	340	345
Pro Glu Ser Ala	Ala His Leu Ile Gln	Ala Ser Glu Arg Arg Val
350	355	360
His Leu Val Val	Ser Arg Gln Val Arg	Gln Arg Ser Pro Asp Ile
365	370	375
Phe Gln Glu Ala	Gly Trp Asn Ser Asn	Gly Ser Trp Ser Pro Gly
380	385	390
Pro Gly Glu Arg	Ser Asn Thr Pro Lys	Pro Leu His Pro Thr Ile
395	400	405
Thr Cys His Glu	Lys Val Val Asn Ile	Gln Lys Asp Pro Gly Glu
410	415	420
Ser Leu Gly Met	Thr Val Ala Gly Gly	Ala Ser His Arg Glu Trp
425	430	435
Asp Leu Pro Ile	Tyr Val Ile Ser Val	Glu Pro Gly Gly Val Ile
440	445	450
Ser Arg Asp Gly	Arg Ile Lys Thr Gly	Asp Ile Leu Leu Asn Val
455	460	465
Asp Gly Val Glu	Leu Thr Glu Val Ser	Arg Ser Glu Ala Val Ala
470	475	480
Leu Leu Lys Arg	Thr Ser Ser Ser Ile	Val Leu Lys Ala Leu Glu
485	490	495
Val Lys Glu Tyr	Glu Pro Gln Glu Asp	Cys Ser Ser Pro Ala Ala
500	505	510
Leu Asp Ser Asn	His Asn Met Ala Pro	Pro Ser Asp Trp Ser Pro
515	520	525
Ser Trp Val Met	Trp Leu Glu Leu Pro	Arg Cys Leu Tyr Asn Cys
530	535	540
Lys Asp Ile Val	Leu Arg Arg Asn Thr	Ala Gly Ser Leu Gly Phe
545	550	555
Cys Ile Val Gly	Gly Tyr Glu Glu Tyr	Asn Gly Asn Lys Pro Phe
560	565	570
Phe Ile Lys Ser	Ile Val Glu Gly Thr	Ala Tyr Asn Asp Gly
575	580	585
Arg Ile Arg Cys	Gly Asp Ile Leu Leu	Ala Val Asn Gly Arg Ser
590	595	600
Thr Ser Gly Met	Ile His Ala Cys Leu	Ala Arg Leu Leu Lys Glu
605	610	615
Leu Lys Gly Arg	Ile Thr Leu Thr Ile	Val Ser Trp Pro Gly Thr
620	625	630
Phe Leu		

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gcccatataa 50
 aggatagaag ctgcacaggg cagctttact tactccagca ccttcctctc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcacagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
 tccagggtgc tctccogaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400
 ctctgggaca catgttctcc aacaaatata cctgggtcaa gtacaacct 450
 ctggagtgct tgatcaaaga cgtggattgg ttcctgcttg ggtcacccat 500
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550
 acacacataa tgtcgggtgc ggaggctgtg caaaggctgg gtcctctgggc 600
 atcttgggaa ttcaatctg tgcagacatt catgttttag atgattagcc 650
 ctctgtgttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700
 tcaaattaaa ttotttccca atgcccacaac taattttgag attcagtcag 750
 aaaatataaa tgctgtatatt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln
				95					100					105
Ala	Leu	Asp	Asn	Met	Phe	Ser	Asn	Lys	Tyr	Thr	Trp	Val	Lys	Tyr
				110					115					120
Asn	Pro	Leu	Glu	Ser	Leu	Ile	Lys	Asp	Val	Asp	Trp	Phe	Leu	Leu
				125					130					135
Gly	Ser	Pro	Ile	Glu	Lys	Leu	Cys	Lys	His	Ile	Pro	Leu	Tyr	Lys
				140					145					150
Gly	Glu	Val	Val	Glu	Asn	Thr	His	Asn	Val	Gly	Ala	Gly	Gly	Cys
				155					160					165
Ala	Lys	Ala	Gly	Leu	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ile	Cys	Ala
				170					175					180

Asp Ile His Val

<210> 222

<211> 992

<212> DNA

<213> Homo sapiens

<400> 222

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tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtc 150

ccattgccta caaagtcctg gaagtgttcc ccaaggccg ctgggtgctc 200

ataacctgct gtgcaccca gccaccacg ccacacac attccctctg 250

tggaaaccaag aacatcaagg tggccaagaa ggtggtgaag acccagcagc 300

cggcctcctt caacctcaac gtcacactca agtccagtc agacctgctc 350

acctacttct gccgggctc ctccacctca ggtgccatg tggacagtgc 400

caggctacag atgcactggg agctgtggtc caagccagt tctgagctgc 450

gggccaaact cactctgcag gacagagggg caggccccc ggtggagatg 500

atctgccagg cgtcctcggg cagccacct atcaccaca gctgatcgg 550

gaaggatggg cagggtccacc tgcagcagag accatgccac aggcagcctg 600

ccaacttctc ctctcctgcc agccagacat cggactgggt ctggtgccag 650

gctgcaaaca acgccaatgt ccagcacagc gccctcacag tgggtcccc 700

aggtgtgac cagaagatgg aggactggca gggccccctg gagagcccc 750

tccttgctct gccgctctac aggagcacc gcgctctgag tgaagaggag 800

tttgggggtt tcaggatagg gaatggggg gtcagaggac gcaaagcagc 850

agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

ggccatcagc gtgcactgtt cgtatttga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met Gly Leu Pro Gly Leu Phe Cys Leu Ala Val Leu Ala Ala Ser
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Ser Phe Ser Lys Ala Arg Glu Glu Glu Ile Thr Pro Val Val Ser
20 25 30

Ile Ala Tyr Lys Val Leu Glu Val Phe Pro Lys Gly Arg Trp Val
35 40 45

Leu Ile Thr Cys Cys Ala Pro Gln Pro Pro Pro Ile Thr Tyr
50 55 60

Ser Leu Cys Gly Thr Lys Asn Ile Lys Val Ala Lys Lys Val Val
65 70 75

Lys Thr His Glu Pro Ala Ser Phe Asn Leu Asn Val Thr Leu Lys
80 85 90

Ser Ser Pro Asp Leu Leu Thr Tyr Phe Cys Arg Ala Ser Ser Thr
95 100 105

Ser Gly Ala His Val Asp Ser Ala Arg Leu Gln Met His Trp Glu
110 115 120

Leu Trp Ser Lys Pro Val Ser Glu Leu Arg Ala Asn Phe Thr Leu
125 130 135

Gln Asp Arg Gly Ala Gly Pro Arg Val Glu Met Ile Cys Gln Ala
140 145 150

Ser Ser Gly Ser Pro Pro Ile Thr Asn Ser Leu Ile Gly Lys Asp
155 160 165

Gly Gln Val His Leu Gln Gln Arg Pro Cys His Arg Gln Pro Ala
170 175 180

Asn Phe Ser Phe Leu Pro Ser Gln Thr Ser Asp Trp Phe Trp Cys
185 190 195

Gln Ala Ala Asn Asn Ala Asn Val Gln His Ser Ala Leu Thr Val
200 205 210

Val Pro Pro Gly Gly Asp Gln Lys Met Glu Asp Trp Gln Gly Pro
215 220 225

Leu Glu Ser Pro Ile Leu Ala Leu Pro Leu Tyr Arg Ser Thr Arg
230 235 240

Arg Leu Ser Glu Glu Glu Phe Gly Gly Phe Arg Ile Gly Asn Gly
245 250 255

Glu Val Arg Gly Arg Lys Ala Ala Ala Met
260 265

<210> 224
<211> 1297
<212> DNA
<213> Homo sapiens

<400> 224
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ctctcttttg tatgacatca ccgtcatccc taagtccaga cctggaccac 150
ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttcactat 200
gactgtggca acaagacagt cacacctgtc agtccccctg ggaagaaact 250
aaatgtcaca acggcctgga aagcacagaa ccagtgactg agagaggttg 300
tggacatact tacagagcaa ctgcgtgaca ttcagctgga gaattacaca 350
cccaaggaa cctcacctc gcaggcaagg atgtcttctg agcagaaaag 400
tgaaggacac agcagtggat ctggcagtt cagtttcgat gggcagatct 450
tctctctctt tgactcagag aagagaatgt ggacaacggt tcatcctgga 500
gccagaaaa tgaagaaaaa gtgggagaat gacaaggttg tggccatgtc 550
cttcattacc ttctcaatgg gagactgtat aggatggctt gaggactttc 600
tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650
atgtcctcag gcacaaccca actcagggcc acagccacca cctcatcct 700
ttgtgcctc ctcctcatcc tccctgctt catcctcctt ggcatctgag 750
gagagtcctt tagagtgaac ggttaaagct gataccaaaa ggctcctgtg 800
agcagggtct tgatcaaat cgccttctg tctggccagc tgcccacgac 850
ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900
ccaatagctc attcactgcc ttgattcctt ttgccaacaa ttttaccago 950
agttatacct aacatattat gcaattttct ctgggtgcta cctgatggaa 1000
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cttctctttt tgtttggaaa atcaagtact tctttgaatg atgatctctt 1100
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tgatatttaa ataaagagtt ctatttccca aaaaaaaaaa aaaaaaa 1297

<210> 225
<211> 246
<212> PRT
<213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
1 5 10 15
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
20 25 30
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
35 40 45
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
50 55 60
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
65 70 75
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
80 85 90
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
95 100 105
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
110 115 120
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
125 130 135
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
140 145 150
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
155 160 165
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
170 175 180
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
185 190 195
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
200 205 210
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
215 220 225
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
230 235 240
Phe Ile Leu Pro Gly Ile
245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

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tgctgctagc tgccttgggc ctcaacaattt tcattctgtt ttctgacttt 100
caagttatat accgtggaat ggagttgac ccaaccataa catcgtggag 150

gggtttaatt ttggtggtag coctcaccca attctggtgt ggctttcttt 200
 gcagaggatt ccacctcaa aatcatgaac tctggtgtt gatcaaaaga 250
 gaatttgat tctactctaa aagtaatat aggactggc aaaagaagct 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcagggtg 350
 atggcaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400
 attcaaaaa gaaaactcaa attgggaggc caaccacag aacagcattt 450
 ctgggcagg ctgtaatcag aattgtgtc gtacatgtc aacagcattg 500
 cttttttccc caaaattaac acattgtgga gaagtgatga tactctcccc 550
 ttacctttcc tctctccatt caagcattca aagtatat tcaatgaatt 600
 aaaccttgca gcaaggagacc ttagataggc ttattctgac tgtatgcttt 650
 accaatgaga gaaaaaaatg catttctgt atcatcctt tcaataaact 700
 gtattcattt tgaaaaaaa aaaaaaaaa aaaaa 735

<210> 227

<211> 115

<212> PRT

<213> Homo sapiens

<400> 227

Met	Glu	Leu	Ile	Pro	Thr	Ile	Thr	Ser	Trp	Arg	Val	Leu	Ile	Leu	1	5	10	15
Val	Val	Ala	Leu	Thr	Gln	Phe	Trp	Cys	Gly	Phe	Leu	Cys	Arg	Gly	20	25	30	35
Phe	His	Leu	Gln	Asn	His	Glu	Leu	Trp	Leu	Leu	Ile	Lys	Arg	Glu	35	40	45	50
Phe	Gly	Phe	Tyr	Ser	Lys	Ser	Gln	Tyr	Arg	Thr	Trp	Gln	Lys	Lys	50	55	60	65
Leu	Ala	Glu	Asp	Ser	Thr	Trp	Pro	Pro	Ile	Asn	Arg	Thr	Asp	Tyr	65	70	75	80
Ser	Gly	Asp	Gly	Lys	Asn	Gly	Phe	Tyr	Ile	Asn	Gly	Gly	Tyr	Glu	80	85	90	95
Ser	His	Glu	Gln	Ile	Pro	Lys	Arg	Lys	Lys	Lys	Leu	Gly	Gly	Gln	95	100	105	110
Pro	Thr	Glu	Gln	His	Phe	Trp	Ala	Arg	Leu						110	115		

<210> 228

<211> 2185

<212> DNA

<213> Homo sapiens

<400> 228

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 cacacatga agctcttctg gcaggttaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccgttcg tctacctcac ggcgcaagtg tggattctgt 150
 gtgcagccat cgctgctgcc gctcagccg ggcgccagaa ctgcccctcc 200
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgcggggg 250
 cctctccgag gtccgcagg gtattccctc gaacaccccg tacctcaacc 300
 tcatggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350
 caccacctgg aggtcctgca gtggggcagg aactccatcc ggagattga 400
 ggtggggggc ttcaacggcc tggccagcct caacaccctg gagctgttcg 450
 acaactggct gacagtcac cctagcgggg cctttgaata cctgtccaag 500
 ctgcgggagc tctggcttcg caacaacccc atcgaaagca tcccctctta 550
 cgccttcaac cgggtgccct cctcatgcg cctggaactg ggggagctca 600
 agaagctgga gtatatctct gaggagcct ttgaggggct gttcaacctc 650
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
 ccccctggtg gggctggagg agctggagat gtcagggaac cacttccctg 750
 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800
 gtcatgaact cacaggtcag cctgattgag cggaatgctt ttgacgggct 850
 ggcttcactt gtggaactca acttggccca caataacctc tcttctttgc 900
 cccatgacct ctttaccctg ctgagggtacc tgggtggagt gcattctaac 950
 cacaacctt ggaactgtga ttgtgacatt ctgtggctag cctggtggct 1000
 tcgagagtat ataccacca attccacctg ctgtggccgc tgcatgctc 1050
 ccatgcacat gcgaggccgc tacctcgttg aggtggacca ggcctccttc 1100
 cagtgccttg ccccttcat catggacgca cctcgagacc tcaacatttc 1150
 tgagggtcgg atggcagaac ttaagtgtcg gactccccct atgtcctccg 1200
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 ccaagatct ctgtcctcaa cgacggcacc ttgaactttt cccacgtgct 1300
 gctttcagac actggggtgt acacatgcat ggtgaccaat gttgcaggca 1350
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 tccaactaca gcttcttcac cacagtaaca gtggagacca cggagatctc 1450
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aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccgac 1750
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 cagcaacagc agctccgtcc ggtgtatcag gtgagggggc agtagtgctg 1850
 cccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900
 ggcccactgg acagaaaaca gcctggggaa ctctctgcac cccacagtca 1950
 ccactatctc tgaaccttat ataattcaga ccataccaa ggacaaggta 2000
 caggaaactc aaatatgact cccctcccc aaaaaactta taaaatgcaa 2050
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
 ttctgtgata tgcttatata ttaagtctat gggctgggta aaaaaaacag 2150
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229

<211> 653

<212> PRT

<213> Homo sapiens

<400> 229

Met	Lys	Leu	Leu	Trp	Gln	Val	Thr	Val	His	His	His	Thr	Trp	Asn
1				5					10					15
Ala	Ile	Leu	Leu	Pro	Phe	Val	Tyr	Leu	Thr	Ala	Gln	Val	Trp	Ile
				20					25					30
Leu	Cys	Ala	Ala	Ile	Ala	Ala	Ala	Ala	Ser	Ala	Gly	Pro	Gln	Asn
				35					40					45
Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val	Val
				50					55					60
Cys	Thr	Arg	Arg	Gly	Leu	Ser	Glu	Val	Pro	Gln	Gly	Ile	Pro	Ser
				65					70					75
Asn	Thr	Arg	Tyr	Leu	Asn	Leu	Met	Glu	Asn	Asn	Ile	Gln	Met	Ile
				80					85					90
Gln	Ala	Asp	Thr	Phe	Arg	His	Leu	His	His	Leu	Glu	Val	Leu	Gln
				95					100					105
Leu	Gly	Arg	Asn	Ser	Ile	Arg	Gln	Ile	Glu	Val	Gly	Ala	Phe	Asn
				110					115					120
Gly	Leu	Ala	Ser	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Trp	Leu
				125					130					135
Thr	Val	Ile	Pro	Ser	Gly	Ala	Phe	Glu	Tyr	Leu	Ser	Lys	Leu	Arg
				140					145					150
Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser	Tyr
				155					160					165
Ala	Phe	Asn	Arg	Val	Pro	Ser	Leu	Met	Arg	Leu	Asp	Leu	Gly	Glu
				170					175					180
Leu	Lys	Lys	Leu	Glu	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	Leu

185	190	195
Phe Asn Leu Lys Tyr 200	Leu Asn Leu Gly Met 205	Cys Asn Ile Lys Asp 210
Met Pro Asn Leu Thr 215	Pro Leu Val Gly Leu 220	Glu Glu Leu Glu Met 225
Ser Gly Asn His Phe 230	Pro Glu Ile Arg Pro 235	Gly Ser Phe His Gly 240
Leu Ser Ser Leu Lys 245	Lys Leu Trp Val Met 250	Asn Ser Gln Val Ser 255
Leu Ile Glu Arg Asn 260	Ala Phe Asp Gly Leu 265	Ala Ser Leu Val Glu 270
Leu Asn Leu Ala His 275	Asn Asn Leu Ser Ser 280	Leu Pro His Asp Leu 285
Phe Thr Pro Leu Arg 290	Tyr Leu Val Glu Leu 295	His Leu His His Asn 300
Pro Trp Asn Cys Asp 305	Cys Asp Ile Leu Trp 310	Leu Ala Trp Trp Leu 315
Arg Glu Tyr Ile Pro 320	Thr Asn Ser Thr Cys 325	Cys Gly Arg Cys His 330
Ala Pro Met His Met 335	Arg Gly Arg Tyr Leu 340	Val Glu Val Asp Gln 345
Ala Ser Phe Gln Cys 350	Ser Ala Pro Phe Ile 355	Met Asp Ala Pro Arg 360
Asp Leu Asn Ile Ser 365	Glu Gly Arg Met Ala 370	Glu Leu Lys Cys Arg 375
Thr Pro Pro Met Ser 380	Ser Val Lys Trp Leu 385	Leu Pro Asn Gly Thr 390
Val Leu Ser His Ala 395	Ser Arg His Pro Arg 400	Ile Ser Val Leu Asn 405
Asp Gly Thr Leu Asn 410	Phe Ser His Val Leu 415	Leu Ser Asp Thr Gly 420
Val Tyr Thr Cys Met 425	Val Thr Asn Val Ala 430	Gly Asn Ser Asn Ala 435
Ser Ala Tyr Leu Asn 440	Val Ser Thr Ala Glu 445	Leu Asn Thr Ser Asn 450
Tyr Ser Phe Phe Thr 455	Thr Val Thr Val Glu 460	Thr Thr Glu Ile Ser 465
Pro Glu Asp Thr Thr 470	Arg Lys Tyr Lys Pro 475	Val Pro Thr Thr Ser 480
Thr Gly Tyr Gln Pro 485	Ala Tyr Thr Thr Ser 490	Thr Thr Val Leu Ile 495
Gln Thr Thr Arg Val	Pro Lys Gln Val Ala	Val Pro Ala Thr Asp

500	505	510
Thr Thr Asp Lys Met Gln Thr Ser Leu	Asp Glu Val Met Lys Thr	
515	520	525
Thr Lys Ile Ile Ile Gly Cys Phe Val	Ala Val Thr Leu Leu Ala	
530	535	540
Ala Ala Met Leu Ile Val Phe Tyr Lys	Leu Arg Lys Arg His Gln	
545	550	555
Gln Arg Ser Thr Val Thr Ala Ala Arg	Thr Val Glu Ile Ile Gln	
560	565	570
Val Asp Glu Asp Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr Ala	
575	580	585
Ala Pro Ser Gly Val Ser Gly Glu Gly	Ala Val Val Leu Pro Thr	
590	595	600
Ile His Asp His Ile Asn Tyr Asn Thr	Tyr Lys Pro Ala His Gly	
605	610	615
Ala His Trp Thr Glu Asn Ser Leu Gly	Asn Ser Leu His Pro Thr	
620	625	630
Val Thr Thr Ile Ser Glu Pro Tyr Ile	Ile Gln Thr His Thr Lys	
635	640	645
Asp Lys Val Gln Glu Thr Gln Ile		
650		

<210> 230

<211> 2846

<212> DNA

<213> Homo sapiens

<400> 230

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 tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150
 tcgggagtgc tgtgaatatg atcagattga gtgcgtctgc cccggaaga 200
 ggggaagtgc ggggtatacc atcccttgct gcaggaatga ggagaatgag 250
 tgtgactcct gcctgatcca ccaggttgc accatctttg aaaactgcaa 300
 gagctgccga aatggctcat ggggggggtac cttggatgac ttctatgtga 350
 aggggttcta ctgtgcagag tgccagcagc gctgggtacgg agggactgac 400
 atgcagtgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450
 aagctatccc ctaaatgctc actgtgaatg gaccattcat gctaaccctg 500
 ggtttgtcat ccaactaaga ttgtcatgt tgagtctgga gtttgactac 550
 atgtgccagt atgactatgt tgaggttcgt gatggagaca accgcgattg 600
 ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctcaactccac gtccctcttcc actccgatgg ctccaagaat 700
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 cccttgtttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800
 agtgtgcctg cttggcaggc tatactgggc agcgtctgtga aaatctcctt 850
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gatgccaggg ctgcaagaa gtaagtttct tcaaagaaga ccatatacaa 2450
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gtccttttcc ttccccatct ctgttacaca ttttaataaa ataagggttg 2700
gctcttgaac tacaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
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1 5 10 15
Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
20 25 30
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

Phe Val Met Leu	Ser Leu Glu Phe Asp	Tyr Met Cys Gln Tyr Asp
170		180
Tyr Val Glu Val	Arg Asp Gly Asp Asn	Arg Asp Gly Gln Ile Ile
185		195
Lys Arg Val Cys	Gly Asn Glu Arg Pro	Ala Pro Ile Gln Ser Ile
200		210
Gly Ser Ser Leu	His Val Leu Phe His	Ser Asp Gly Ser Lys Asn
215		225
Phe Asp Gly Phe	His Ala Ile Tyr Glu	Glu Ile Thr Ala Cys Ser
230		240
Ser Ser Pro Cys	Phe His Asp Gly Thr	Cys Val Leu Asp Lys Ala
245		255
Gly Ser Tyr Lys	Cys Ala Cys Leu Ala	Gly Tyr Thr Gly Gln Arg
260		270
Cys Glu Asn Leu	Leu Glu Glu Arg Asn	Cys Ser Asp Pro Gly Gly
275		285
Pro Val Asn Gly	Tyr Gln Lys Ile Thr	Gly Gly Pro Gly Leu Ile
290		300
Asn Gly Arg His	Ala Lys Ile Gly Thr	Val Val Ser Phe Phe Cys
305		315
Asn Asn Ser Tyr	Val Leu Ser Gly Asn	Glu Lys Arg Thr Cys Gln
320		330
Gln Asn Gly Glu	Trp Ser Gly Lys Gln	Pro Ile Cys Ile Lys Ala
335		345
Cys Arg Glu Pro	Lys Ile Ser Asp Leu	Val Arg Arg Arg Val Leu
350		360
Pro Met Gln Val	Gln Ser Arg Glu Thr	Pro Leu His Gln Leu Tyr
365		375
Ser Ala Ala Phe	Ser Lys Gln Lys Leu	Gln Ser Ala Pro Thr Lys
380		390
Lys Pro Ala Leu	Pro Phe Gly Asp Leu	Pro Met Gly Tyr Gln His
395		405
Leu His Thr Gln	Leu Gln Tyr Glu Cys	Ile Ser Pro Phe Tyr Arg
410		420
Arg Leu Gly Ser	Ser Arg Arg Thr Cys	Leu Arg Thr Gly Lys Trp
425		435
Ser Gly Arg Ala	Pro Ser Cys Ile Pro	Ile Cys Gly Lys Ile Glu
440		450
Asn Ile Thr Ala	Pro Lys Thr Gln Gly	Leu Arg Trp Pro Trp Gln
455		465
Ala Ala Ile Tyr	Arg Arg Thr Ser Gly	Val His Asp Gly Ser Leu
470		480

His Lys Gly Ala	Trp Phe Leu Val Cys	Ser Gly Ala Leu Val Asn
485		495
Glu Arg Thr Val	Val Val Ala Ala His	Cys Val Thr Asp Leu Gly
500		505
Lys Val Thr Met	Ile Lys Thr Ala Asp	Leu Lys Val Val Leu Gly
515		525
Lys Phe Tyr Arg	Asp Asp Asp Arg Asp	Glu Lys Thr Ile Gln Ser
530		535
Leu Gln Ile Ser	Ala Ile Ile Leu His	Pro Asn Tyr Asp Pro Ile
545		550
Leu Leu Asp Ala	Asp Ile Ala Ile Leu	Lys Leu Leu Asp Lys Ala
560		565
Arg Ile Ser Thr	Arg Val Gln Pro Ile	Cys Leu Ala Ala Ser Arg
575		580
Asp Leu Ser Thr	Ser Phe Gln Glu Ser	His Ile Thr Val Ala Gly
590		595
Trp Asn Val Leu	Ala Asp Val Arg Ser	Pro Gly Phe Lys Asn Asp
605		610
Thr Leu Arg Ser	Gly Val Val Ser Val	Val Asp Ser Leu Leu Cys
620		625
Glu Glu Gln His	Glu Asp His Gly Ile	Pro Val Ser Val Thr Asp
635		640
Asn Met Phe Cys	Ala Ser Trp Glu Pro	Thr Ala Pro Ser Asp Ile
650		655
Cys Thr Ala Glu	Thr Gly Gly Ile Ala	Ala Val Ser Phe Pro Gly
665		670
Arg Ala Ser Pro	Glu Pro Arg Trp His	Leu Met Gly Leu Val Ser
680		685
Trp Ser Tyr Asp	Lys Thr Cys Ser His	Arg Leu Ser Thr Ala Phe
695		700
Thr Lys Val Leu	Pro Phe Lys Asp Trp	Ile Glu Arg Asn Met Lys
710		715

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcaactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gctcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
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attcacgtaa taaaaacat gggcttcaac ctgactttcc acctttcccta 150
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtggttgggt 200
gggccaccag taactacttc gtgggtgcca ttcaagagat tccataaagca 250
aaggagtcca tggctaattt ccataagacc ctcatcttgg ggaagggaaa 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgctcagagg 450
ccggtatcgc cctcaggaat gtaaagcttt acagaggggt gccatcctcg 500
ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatcgagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
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acagtggata ttttgggggt gttactgccc taagcagaga gcagttttcc 850
aagggtgaat gattctctaa caactactgg ggtatggggag gcgaagacga 900
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aatgaggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
 ctggagaaca gatgggttga gtatgtgttc ttataaatta gtatctgttg 1100
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 tgaccctgga tcttttggtg atgttttgaa gaactgattc tttgtttgca 1200
 ataattttgg octagagact tcaaatagta gcacacatta agaaccotgtt 1250
 acagctcatt gttgagctga atttttcctt tttgtatttt cttagcagag 1300
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 tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
 acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950
 gtgaaaaagc aaaa 1964

<210> 236

<211> 344

<212> PRT

<213> Homo sapiens

<220>

<221> Signal peptide

<222> 1-27

<223> Signal peptide

<220>

<221> N-glycosylation sites

<222> 4-7, 220-223, 335-338

<223> N-glycosylation sites

<220>

<221> Xylose isomerase proteins

<222> 191-201

<223> Xylose isomerase proteins

<400> 236

Met Gly Phe Asn Leu Thr Phe His Leu Ser Tyr Lys Phe Arg Leu

1

5

10

15

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr		
				20					25					30		
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys		
				35					40					45		
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly		
				50					55					60		
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp		
				65					70					75		
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu		
				80					85					90		
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn		
				95					100					105		
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala		
				110					115					120		
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys		
				125					130					135		
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg		
				140					145					150		
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly		
				155					160					165		
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu		
				170					175					180		
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val		
				185					190					195		
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu		
				200					205					210		
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg		
				215					220					225		
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg		
				230					235					240		
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly		
				245					250					255		
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Glu	Arg	Val	Glu	Leu	Gln		
				260					265					270		
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr		
				275					280					285		
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu		
				290					295					300		
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp		
				305					310					315		
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn		
				320					325					330		

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
ccttacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcac cgtctcgcgt toacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
caggaatgta aagctttaca gagggctgcc atcctcgttc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
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tctcccgcctc cggggcccgc aatggcccag gcagtggtgt cgcgcctcgg 150
ccgcatactc tggttgct gctcctgcc ctggggcccc gcagggtgtg 200
ccgcaggcct gtatgaactc aatctcacc cccatagccc tgccaccacg 250
ggagcgggtg tgaccatctc ggcagcctg gtggccaaag acaacggcag 300
cctggccctg ccogctgacg cccacctcta ccgcttcac tggatccaca 350
cccgcgtgtg gcttactggc aagatggaga agggctctcag ctccaccatc 400
cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
tgccgctgac tgctgtagt gccagcctgt ggccaggggc tttgtggtcc 500
tccccatcac agagttctc gtgggggacc ttgttgtoac ccagaacact 550

tcctaccct ggcccagctc ctatctcact aagaccgtcc tgaagtctc 600
 ctctctctc caagaccga gcaacttctc caagaccgcc ttgtttctc 650
 acagctggga cttcggggac gggaccaga tggtagctga agactccgtg 700
 gtctattata actattccat catcgggacc ttcaccgtga agctcaaagt 750
 ggtggcggag tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800
 agaagaccgg gaacttctcc gcctcgtga agctgcagga aaccttcga 850
 ggcatccaag tggtggggcc caccctaatt cagaccttc aaaagatgac 900
 cgtgaccttg aacttctcgg ggagccctcc tctgactgtg tgetggcgtc 950
 tcaagcctga gtgcctccg ctggaggaag gggagtcca ccctgtgtcc 1000
 gtggccagca cagcgtacaa cctgaccac accttcaggg acctggggg 1050
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 accacaagat ccaggtgtgg cctccagaa tccagccggc tgtcttctc 1150
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 ctggagactc catctgagta cctgaaaatt gttcgtgaga accacgggct 1350
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 cctcccccac cccatctcag tgttaactga ctgctgactt ggagtttcca 1450
 gcagggtggt gtgcaccact gaccaggagg ggttcatttg cgtggggctg 1500
 ttggcctgga tcatccatcc atctgtacag ttcagccact gccacaagcc 1550
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 cagccactga cataagccc actcgggttac caccctcttg accccctacc 1650
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 aaggtgtgac acatagatgg gcacactcac agagagaagt gtgcagtgtc 1900
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 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcggtt 2000
 gctgggatgc acctgcact agagctgaaa ggaaatttga cctccaagca 2050
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 gttcttgccc cttttataag gccatccctag tccctgctgg ctggcagggg 2150

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 gcttgacagt agccagatg gcgccactgc actccagcct gagtgcaga 2550
 gcgagactct gtctcca 2567

<210> 241
 <211> 423
 <212> PRT
 <213> Homo sapiens

<400> 241
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 20 25 30
 Tyr Glu Leu Asn Leu Thr Thr Asp Ser Pro Ala Thr Thr Gly Ala
 35 40 45
 Val Val Thr Ile Ser Ala Ser Leu Val Ala Lys Asp Asn Gly Ser
 50 55 60
 Leu Ala Leu Pro Ala Asp Ala His Leu Tyr Arg Phe His Trp Ile
 65 70 75
 His Thr Pro Leu Val Leu Thr Gly Lys Met Glu Lys Gly Leu Ser
 80 85 90
 Ser Thr Ile Arg Val Val Gly His Val Pro Gly Glu Phe Pro Val
 95 100 105
 Ser Val Trp Val Thr Ala Ala Asp Cys Trp Met Cys Gln Pro Val
 110 115 120
 Ala Arg Gly Phe Val Val Leu Pro Ile Thr Glu Phe Leu Val Gly
 125 130 135
 Asp Leu Val Val Thr Gln Asn Thr Ser Leu Pro Trp Pro Ser Ser
 140 145 150
 Tyr Leu Thr Lys Thr Val Leu Lys Val Ser Phe Leu Leu His Asp
 155 160 165
 Pro Ser Asn Phe Leu Lys Thr Ala Leu Phe Leu Tyr Ser Trp Asp
 170 175 180
 Phe Gly Asp Gly Thr Gln Met Val Thr Glu Asp Ser Val Val Tyr
 185 190 195

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val
				200					205					210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val
				215					220					225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu
				230					235					240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr
				245					250					255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro
				260					265					270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu
				275					280					285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn
				290					295					300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile
				305					310					315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile
				320					325					330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro
				335					340					345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met
				350					355					360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro
				365					370					375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly
				380					385					390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg
				395					400					405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr
				410					415					420

Tyr Thr Val

<210> 242

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 242

catttcctta ccctgaccc agctcc 26

<210> 243

<211> 25

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgaccg agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50
gctcccatgat ctgggccgct tgccctcctgc tccctcctcct cctcgccagc 100
ctgaccacgtg gctctgtttt ccacacaacag acggggacaac ttgcagagct 150
gcaaccccg gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccaacttcc ccactctgcat ttctctgtgc 250
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acctgccctg ccccgctccc ctcccttctc tatttatctc tgctgcccc 350
gaacataggt ctggaataa aatggctggt tcttttgttt tccaaaaaaa 400
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
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Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr

80

<210> 247

<211> 2359

<212> DNA

<213> Homo sapiens

<400> 247

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agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcacct 150
ccttctcggt ttcacatag tgccagccat ttttgagtc tcttttggt 200
tccgaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
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ctacaccaac ggaatcattg caaggatcc cacttacta gaagaagaga 350
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 tgtttcaagt acaggccac aaacggggc acggcaggcc tgagctcaga 2300
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<210> 248
 <211> 456
 <212> PRT
 <213> Homo sapiens

<400> 248
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 Gly Ile Ser Leu Thr Val Leu Phe Thr Leu Leu Leu Val Phe Ile
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 Ile Val Pro Ala Ile Phe Gly Val Ser Phe Gly Ile Arg Lys Leu
 35 40 45
 Tyr Met Lys Ser Leu Leu Lys Ile Phe Ala Trp Ala Thr Leu Arg
 50 55 60
 Met Glu Arg Gly Ala Lys Glu Lys Asn His Gln Leu Tyr Lys Pro
 65 70 75

Tyr Thr Asn Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu
	80						85				90
Glu Ile Lys Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp
	95					100					105
Asn Thr Pro Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg
	110					115					120
Lys Gly Met Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe
	125					130					135
Ser Ala Glu Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn
	140					145					150
Tyr Asn Phe Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly
	155					160					165
Leu Gly Val Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile
	170					175					180
Ala Leu Ala Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr
	185					190					195
Val Val Gly Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser
	200					205					210
Lys His Val His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu
	215					220					225
Thr Ala Ile Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn
	230					235					240
Gly Gly Ile Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile
	245					250					255
Ile Leu Ala Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His
	260					265					270
Gly Gly Leu Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys
	275					280					285
Pro His Val Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu
	290					295					300
Val Ala Lys Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu
	305					310					315
Pro Ile Leu Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser
	320					325					330
Val Met Met Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val
	335					340					345
Tyr Pro Val Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe
	350					355					360
Trp Asn Ser Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met
	365					370					375
Met Thr Ser Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro
	380					385					390

Met	Thr	Arg	Glu	Ala	Asp	Glu	Asp	Ala	Val	Gln	Phe	Ala	Asn	Arg
				395					400					405
Val	Lys	Ser	Ala	Ile	Ala	Arg	Gln	Gly	Gly	Leu	Val	Asp	Leu	Leu
			410						415					420
Trp	Asp	Gly	Gly	Leu	Lys	Arg	Glu	Lys	Val	Lys	Asp	Thr	Phe	Lys
			425						430					435
Glu	Glu	Gln	Gln	Lys	Leu	Tyr	Ser	Lys	Met	Ile	Val	Gly	Asn	His
			440						445					450
Lys	Asp	Arg	Ser	Arg	Ser									
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<210> 249

<211> 1103

<212> DNA

<213> Homo sapiens

<400> 249

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catcctgccc ctgggcctgg ctccagacac ctttgacgat acctatgttg 200
gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250
atggcccacc atgccctgct gcgggaatcc tgggaggcag ccaggagac 300
ctgggaggag aagcgtcgag ggcttacctt gccccctggc tcaaagccc 350
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caaggaaagt actgaggcag ccacttgatt gaacgggtgt gcaatgtgga 1050

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gga 1103

<210> 250
<211> 240
<212> PRT
<213> Homo sapiens

<400> 250

Met	Ala	Leu	Ala	Ala	Leu	Met	Ile	Ala	Leu	Gly	Ser	Leu	Gly	Leu	1	5	10	15
His	Thr	Trp	Gln	Ala	Gln	Ala	Val	Pro	Thr	Ile	Leu	Pro	Leu	Gly	20	25	30	
Leu	Ala	Pro	Asp	Thr	Phe	Asp	Asp	Thr	Tyr	Val	Gly	Cys	Ala	Glu	35	40	45	
Glu	Met	Glu	Glu	Lys	Ala	Ala	Pro	Leu	Leu	Lys	Glu	Glu	Met	Ala	50	55	60	
His	His	Ala	Leu	Leu	Arg	Glu	Ser	Trp	Glu	Ala	Ala	Gln	Glu	Thr	65	70	75	
Trp	Glu	Asp	Lys	Arg	Arg	Gly	Leu	Thr	Leu	Pro	Pro	Gly	Phe	Lys	80	85	90	
Ala	Gln	Asn	Gly	Ile	Ala	Ile	Met	Val	Tyr	Thr	Asn	Ser	Ser	Asn	95	100	105	
Thr	Leu	Tyr	Trp	Glu	Leu	Asn	Gln	Ala	Val	Arg	Thr	Gly	Gly	Gly	110	115	120	
Ser	Arg	Glu	Leu	Tyr	Met	Arg	His	Phe	Pro	Phe	Lys	Ala	Leu	His	125	130	135	
Phe	Tyr	Leu	Ile	Arg	Ala	Leu	Gln	Leu	Leu	Arg	Gly	Ser	Gly	Gly	140	145	150	
Cys	Ser	Arg	Gly	Pro	Gly	Glu	Val	Val	Phe	Arg	Gly	Val	Gly	Ser	155	160	165	
Leu	Arg	Phe	Glu	Pro	Lys	Arg	Leu	Gly	Asp	Ser	Val	Arg	Leu	Gly	170	175	180	
Gln	Phe	Ala	Ser	Ser	Ser	Leu	Asp	Lys	Ala	Val	Ala	His	Arg	Phe	185	190	195	
Gly	Glu	Lys	Arg	Arg	Gly	Cys	Val	Ser	Ala	Pro	Gly	Val	Gln	Leu	200	205	210	
Gly	Ser	Gln	Ser	Glu	Gly	Ala	Ser	Ser	Leu	Pro	Pro	Trp	Lys	Thr	215	220	225	
Leu	Leu	Leu	Ala	Pro	Gly	Glu	Phe	Gln	Leu	Ser	Gly	Val	Gly	Pro	230	235	240	

<210> 251
<211> 50
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

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<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252

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caacatgcct caccctcatc tatatccttt ggcagctcac agggctcaga 100

gcctctggac cagtgaaga gctggctcgtt tcctgtgtg gggccgtgac 150

tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200

tcaacacac ccctctgtgc accatacagc cagaaggggg cactatcata 250

gtgacccaaa atcgtaatat ggagagagta gacttcccag atggaggcta 300

ctccctgaag ctacagcaac tgaagaagaa tgactcaggg atctactatg 350

tggggatata cagctcatca ctccagcagc cctccaccca ggagtacgtg 400

ctgcattgtc acgagcacct gtcaaaagcct aaagtcacca tgggtctgca 450

gagcaataag aatggcacct gtgtgaccaa tctgacatgc tgcattggaac 500

atggggaaga ggatgtgatt tatacctgga aggccctggg gcaagcagcc 550

aatgagtcct ataattgggtc catcctcccc atctcctgga gatggggaga 600

aagtgatatg accttcatct gcgttgccag gaacctgtgc agcagaaact 650

tctcaagccc catccttgcc aggaagctct gtgaagggtc tgcctgatgac 700

ccagattcct ccattggtcct cctgtgtctc ctgttggtgc cctcctgtct 750

cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800

aagaagagta cattgaagag aagaagagag tggacatttt tcgggaaact 850

cctaacatat gccccattc tggagagaac acagagtag acacaatccc 900

tcacactaat agaacaatcc taaaggaaga tcagcaaat acggtttact 950

ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000

atgccagaca cccaaggct atttgccatc gagaatgta tctagacagc 1050

agtgcactcc cctaagtctc tgctca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

1	5	10	15
Gln Leu Thr Gly	Ser Ala Ala Ser Gly	Pro Val Lys Glu Leu Val	20 25 30
Gly Ser Val Gly	Gly Ala Val Thr Phe	Pro Leu Lys Ser Lys Val	35 40 45
Lys Gln Val Asp	Ser Ile Val Trp Thr	Phe Asn Thr Thr Pro Leu	50 55 60
Val Thr Ile Gln	Pro Glu Gly Gly Thr	Ile Ile Val Thr Gln Asn	65 70 75
Arg Asn Arg Glu	Arg Val Asp Phe Pro	Asp Gly Gly Tyr Ser Leu	80 85 90
Lys Leu Ser Lys	Leu Lys Lys Asn Asp	Ser Gly Ile Tyr Tyr Val	95 100 105
Gly Ile Tyr Ser	Ser Ser Leu Gln Gln	Pro Ser Thr Gln Glu Tyr	110 115 120
Val Leu His Val	Tyr Glu His Leu Ser	Lys Pro Lys Val Thr Met	125 130 135
Gly Leu Gln Ser	Asn Lys Asn Gly Thr	Cys Val Thr Asn Leu Thr	140 145 150
Cys Cys Met Glu	His Gly Glu Glu Asp	Val Ile Tyr Thr Trp Lys	155 160 165
Ala Leu Gly Gln	Ala Ala Asn Glu Ser	His Asn Gly Ser Ile Leu	170 175 180
Pro Ile Ser Trp	Arg Trp Gly Glu Ser	Asp Met Thr Phe Ile Cys	185 190 195
Val Ala Arg Asn	Pro Val Ser Arg Asn	Phe Ser Ser Pro Ile Leu	200 205 210
Ala Arg Lys Leu	Cys Glu Gly Ala Ala	Asp Asp Pro Asp Ser Ser	215 220 225
Met Val Leu Leu	Cys Leu Leu Leu Val	Pro Leu Leu Leu Ser Leu	230 235 240
Phe Val Leu Gly	Leu Phe Leu Trp Phe	Leu Lys Arg Glu Arg Gln	245 250 255
Glu Glu Tyr Ile	Glu Glu Lys Lys Arg	Val Asp Ile Cys Arg Glu	260 265 270
Thr Pro Asn Ile	Cys Pro His Ser Gly	Glu Asn Thr Glu Tyr Asp	275 280 285
Thr Ile Pro His	Thr Asn Arg Thr Ile	Leu Lys Glu Asp Pro Ala	290 295 300
Asn Thr Val Tyr	Ser Thr Val Glu Ile	Pro Lys Lys Met Glu Asn	305 310 315
Pro His Ser Leu	Leu Thr Met Pro Asp	Thr Pro Arg Leu Phe Ala	

Tyr Glu Asn Val Ile
335

<210> 254
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 254
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ggccgtgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgtca ccatacagcc agaagggggc 200
actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250
tggaggctac tccttgaaagc tcagcaaaact gaagaagaat gactcaggga 300
tctactatgt ggggatatac agctcatcac tccagcagcc ctcccccag 350
gagtacgtgc tgcattgtcta cgagcacctg tcaaaagccta aagtaccat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcattgaaca tggggaagag gatgtgattt atacctggaa ggccctgggg 500
caagcagcca atgagtccta taatgggtcc atcctcccca tctcctggag 550
atggggagaa agtgatatga ccttcatctg cgttgccagg aacctgtca 600
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaaggtgct 650
gctgatgacc cagattcctc catggctcctc ctgtgtctcc tgttgggtgc 700
cctcctgctc agtctctttg tactggggct atttcttttg tttctgaaga 750
gagagagaca agaagagtac attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg cccccattct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaataa 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tcccactca 950
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ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

<210> 255
<211> 860
<212> DNA
<213> Homo sapiens

<400> 255
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 aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
 gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200
 acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
 ccttagttct taaagtccat actgtaagag atgaagagtgt ctccgaatta 300
 tctatgggtg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
 tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
 ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
 gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggtt 500
 tgcacaaacta tgtgaggagc atggaatcct tagagaaaa atcattgacc 550
 tatccaatgc caatcgtgc ctccaggccc gagaatgaag aatggcctga 600
 gctccagtgt ttgagtggac acttctcacc aggactccac catcatccct 650
 tctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
 ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
 acctcatcaa gaatcaaaga cttctttaaa tttctcttg atacaccctt 800
 gacaattttt catgaaatta ttctctcttc tgttcaataa atgattaccc 850
 ttgcacttaa 860

<210> 256

<211> 180

<212> PRT

<213> Homo sapiens

<400> 256

Met	Lys	Met	Leu	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Thr	Leu	Val	Cys
1			5						10					15
Val	His	Ala	Glu	Glu	Ala	Ser	Ser	Thr	Gly	Arg	Asn	Phe	Asn	Val
			20						25					30
Glu	Lys	Ile	Asn	Gly	Glu	Trp	His	Thr	Ile	Ile	Leu	Ala	Ser	Asp
			35						40					45
Lys	Arg	Glu	Lys	Ile	Glu	Glu	His	Gly	Asn	Phe	Arg	Leu	Phe	Leu
			50						55					60
Glu	Gln	Ile	His	Val	Leu	Glu	Asn	Ser	Leu	Val	Leu	Lys	Val	His
			65						70					75
Thr	Val	Arg	Asp	Glu	Glu	Cys	Ser	Glu	Leu	Ser	Met	Val	Ala	Asp
			80						85					90
Lys	Thr	Glu	Lys	Ala	Gly	Glu	Tyr	Ser	Val	Thr	Tyr	Asp	Gly	Phe
			95						100					105
Asn	Thr	Phe	Thr	Ile	Pro	Lys	Thr	Asp	Tyr	Asp	Asn	Phe	Leu	Met
			110						115					120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
				125					130					135
Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
				140					145					150
Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
				155					160					165
Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
				170					175					180

<210> 257
 <211> 766
 <212> DNA
 <213> Homo sapiens

<400> 257
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 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaattt 150
 tctcaaaacc ccattctctg ctttgagtgg tggttccagc gaattatag 200
 agcaggtctg atggccattc cagcaacaac aatgtccttg acagaagaa 250
 aaagagcgtg ctgcaacaac agaactggaa tgtttcttct atcatttttc 300
 agtgtgatca cagtcattgg tgcctctgtat tgcagtctga tatccatcca 350
 ggctctctta aaaggtcctc tcatgtgtaa ttctccaagc aacagtaatg 400
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
 ttcaacttgc agtgggtttt caatgactct tgtgcaccto ctactggttt 500
 caataaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550
 gtttccactt cgattctgaa gaaaacaaac ataggcttat ccactctcta 600
 gtatttttag gtctattgct tgttggaatt ctggaggtcc tgtttgggct 650
 cagtcagata gtcacgggtt tcttggctg tctgtgtgga gtctctaagc 700
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 gtttgaaaaa aaaaaa 766

<210> 258
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 258
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
 1 5 10
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
 20 25 30
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

	35		40		45
Ser Cys Phe Glu	Trp Trp Phe Pro Gly	Ile Ile Gly Ala Gly	Leu		
	50		55		60
Met Ala Ile Pro	Ala Thr Thr Met Ser	Leu Thr Ala Arg Lys	Arg		
	65		70		75
Ala Cys Cys Asn	Asn Arg Thr Gly Met	Phe Leu Ser Ser Phe	Phe		
	80		85		90
Ser Val Ile Thr	Val Ile Gly Ala Leu	Tyr Cys Met Leu Ile	Ser		
	95		100		105
Ile Gln Ala Leu	Leu Lys Gly Pro Leu	Met Cys Asn Ser Pro	Ser		
	110		115		120
Asn Ser Asn Ala	Asn Cys Glu Phe Ser	Leu Lys Asn Ile Ser	Asp		
	125		130		135
Ile His Pro Glu	Ser Phe Asn Leu Gln	Trp Phe Phe Asn Asp	Ser		
	140		145		150
Cys Ala Pro Pro	Thr Gly Phe Asn Lys	Pro Thr Ser Asn Asp	Thr		
	155		160		165
Met Ala Ser Gly	Trp Arg Ala Ser Ser	Phe His Phe Asp Ser	Glu		
	170		175		180
Glu Asn Lys His	Arg Leu Ile His Phe	Ser Val Phe Leu Gly	Leu		
	185		190		195
Leu Leu Val Gly	Ile Leu Glu Val Leu	Phe Gly Leu Ser Gln	Ile		
	200		205		210
Val Ile Gly Phe	Leu Gly Cys Leu Cys	Gly Val Ser Lys Arg	Arg		
	215		220		225
Ser Gln Ile Val					

<210> 259

<211> 434

<212> DNA

<213> Homo sapiens

<400> 259

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gctaccaggc ccattgctctt gtctgcccag ctgttgcttc tgagatcaca 150
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taatccacct ccagaagctc ttgcagccaa gttggaagtg aagcactgca 250
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tccaaagtct ttcaacgaca cctgatctt cactaaaaat tgtaaaggtt 400

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tcaacacggt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys
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Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln
35 40 45

Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

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ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagtg cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200

agagagtgac cctggccctt ctctactgg caggcctgac tgccttggaa 250

gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgagg agggctctg gccattgctg 350

ggatcgccgg agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc ccaactcatca ctccaggctc 450

tgccactact tgetgagcac aggaactggcc tccagggatg gcttgaagcc 500

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ttctttatga attaaactcg cccacaccac ccctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
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Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
20 25 30

Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
35 40 45

Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
50 55 60

Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
65 70 75

Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

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actcctctgt ctggttgtgg gctcctgggt actcgcccg atcctggctt 150
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ccccaaaaa ggaactggtt ttgggggtcac ctgggctga tcaactctac 250
agaggagggg ttgaaggact cgaccagat gtcgccacc tattccacag 300
gctttacggt atggctgggt cccatcatcc ccttcactgt tttatgcc 350
cctgacacca tccggtctat caccaatgcc tcagctgcca ttgacacca 400
ggataatctc ttcacaggt tcctgaagcc ctggctggga gaagggatac 450
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gccttcatt tcaacatcct gaagtctat ataacgatc tcaacaagag 550
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600
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 tctcctgggt cctgtacaac cttgcgaggc acccagaata ccaggagcgc 1100
 tgccgacagg aggtgcaaga gcttctgaag gaccgcgacg ctaagagatg 1150
 tgaatgggac gacctggccc agctgccctt cctgacctg tgctggaagg 1200
 agagcctgag gttacatccc ccagctccct tcactcccg atgctgcacc 1250
 caggacattg ttctccaga tggccgagtc atcccaaaag gcattacctg 1300
 cctcatcgat attatagggg tcatcaca ccaactgtg tgcccgagtc 1350
 ctgagggtcta cgaccccttc cgctttgacc cagagaacag caaggggagg 1400
 tcacctgtg cttttattcc tttctccgca gggccaggga actgcatcgg 1450
 gcaggcgttc gccatggcgg agatgaaagt ggtcctggcg ttgatgtgc 1500
 tgcacttcgg gttcctgcca gaccacactg agccccgag gaagctggaa 1550
 ttgatcatgc gcgccgaggg cgggctttgg ctgcgggttg agccctgaa 1600
 tgtaggcttg cagtgaactt ctgaccatc cacctgttt tttgcagatt 1650
 gtcataata aaacgggtgt gtcaaa 1676

<210> 264

<211> 524

<212> PRT

<213> Homo sapiens

<400> 264

Met	Ser	Leu	Leu	Ser	Leu	Pro	Trp	Leu	Gly	Leu	Arg	Pro	Val	Ala	
1				5					10					15	
Met	Ser	Pro	Trp	Leu	Leu	Leu	Leu	Val	Val	Gly	Ser	Trp	Leu		
				20				25					30		
Leu	Ala	Arg	Ile	Leu	Ala	Trp	Thr	Tyr	Ala	Phe	Tyr	Asn	Asn	Cys	
				35				40						45	
Arg	Arg	Leu	Gln	Cys	Phe	Pro	Gln	Pro	Pro	Lys	Arg	Asn	Trp	Phe	
				50				55						60	
Trp	Gly	His	Leu	Gly	Leu	Ile	Thr	Pro	Thr	Glu	Glu	Gly	Leu	Lys	
				65				70						75	
Asp	Ser	Thr	Gln	Met	Ser	Ala	Thr	Tyr	Ser	Gln	Gly	Phe	Thr	Val	
				80				85						90	
Trp	Leu	Gly	Pro	Ile	Ile	Pro	Phe	Ile	Val	Leu	Cys	His	Pro	Asp	
				95				100						105	
Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys	
				110				115						120	
Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly	
				125				130						135	

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	140	145	150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	155	160	165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	170	175	180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	185	190	195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	200	205	210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	215	220	225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	230	235	240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	245	250	255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	260	265	270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	275	280	285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	290	295	300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	305	310	315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	320	325	330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	335	340	345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	350	355	360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	365	370	375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	380	385	390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	395	400	405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	410	415	420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	425	430	435
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	440	445	450

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
455 460 465

Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
470 475 480

Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
485 490 495

Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
500 505 510

Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
515 520

<210> 265
<211> 584
<212> DNA
<213> Homo sapiens

<400> 265
caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
ctggcctcct gctgtttgct ttccacagga ttcttaaatc ctctcttctc 100
tcttctctct cttgactcca gggaaatata ctttcaactc tcagcacctc 150
atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
cagatatggc cagagatgct ggggtcagaa agaggggata ttctcaggaa 250
agcagactca agtaccaca tttttaaccc aagaggaaat ttgagaaagt 300
ttcaggattt ctctggacaa gatcctaaca ttttactgag tcactctttg 350
gccagaatct ggaaccata caagaaacgt gagactcctg attgcttctg 400
gaaatactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450
accatcttta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
<211> 124
<212> PRT
<213> Homo sapiens

<400> 266
Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
1 5 10 15
Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
20 25 30
Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
35 40 45
Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr
65 75

Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe
80 85 90

Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg
95 100 105

Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp
110 115 120

Lys Tyr Cys Val

<210> 267
<211> 654
<212> DNA
<213> Homo sapiens

<400> 267
gaacattttt agttccaag gaatgtacat cagccccacg gaagctaggc 50
cacctctggg atgggggtgc tggtttaaaa caaacgccac tcatcctata 100
taaggacctg acagccacca ggcaccacct cggccaggaa ctgcaggccc 150
acctgtctgc aaccagctg aggccatgcc ctcccagggt accgtotgca 200
gcctctctgct cctcggcatg ctctggctgg acttggccat ggcaggctcc 250
agcttctcta gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300
gaagccacca gccaaagtgc agccccgagc tctagcaggc tggctccgcc 350
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtcggc 400
ttcaacgccc cctttgatgt tggaatcaag ctgtcagggt ttcagtacca 450
gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500
aggccaaaga ggccccagcc gacaagtgat cggccacaag ccttactcac 550
ctctctctaa gtttagaagc gctcatctgg cttttcgctt gcttctgcag 600
caactcccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650
tgta 654

<210> 268
<211> 117
<212> PRT
<213> Homo sapiens

<400> 268
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Gly Met
1 5 10 15

Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
20 25 30

Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269

<211> 1332

<212> DNA

<213> Homo sapiens

<400> 269

cggccacagc tggcatgctc tgccatgatcg ccatactgct gtatgtcctc 50

gtccagtacc tcgtgaacc cggggtgctc cgcacggacc ccagatgtca 100

agaatatgaa cactgtgctg ctgttccctc coctgttccc ggtgcagggtg 150

cagaccccta tagtcgtgat catcgggatg ctctgtctcc tgctggactt 200

tcttggtctg gtgcacctgg gccagctgct catcttccac atctacctga 250

gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggttggtcaga 300

gctgctcacc ttacacctct acttgagtat gtccttaacc ctgagcccc 350

cacgctggg gccagagtct ttgtcccccg tgtgcatg tggtcagggt 400

cagcctctcc cagaagttag atcattggaca aaaagggcaa atcacaggaa 450

gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500

gccgagacct gcaggagtgg tgccagggtc ttgaagtaac aagtttaaaa 550

tggttcagaga caatggaatg gaattctatta ggcaagaaca ggacattatg 600

aaataaggac aggtggactt ccaaaaacac aagtagaat totaacaatg 650

aaatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700

tgtggtcttg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750

gttctgtgaa gacggagggt aaactcccca gccccagaa aacctgtgtt 800

ggaagtaaca acaacctccc tgctctggc accagcgtt ttggtcatgg 850

tgggccagct gcaaagcgtc ttccattctc tgggcagtgg tggccccag 900

gctgtggcct ctcagggggt ttctgtggac acgggcagca gagtgtgtcc 950

aggccagccc ccaagaatgc cctgctctg acagcttggc caacccctgg 1000

tcagggcaga gggagtggg tgggtcaggc tctgggtcca cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgcccag ctcagaatga 1100
 acacacccca ccaagagcct ccttgttcat aaccacaggt taccctacaa 1150
 accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
 cgcatacttt acagtcactg ttgtcttgcc tgaggggtga atttttttta 1250
 atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270
 <211> 142
 <212> FRT
 <213> Homo sapiens

<400> 270
 Met Asn Thr Trp Leu Leu Phe Leu Pro Leu Phe Pro Val Gln Val
 1 5 10 15
 Gln Thr Leu Ile Val Val Ile Ile Gly Met Leu Val Leu Leu Leu
 20 25 30
 Asp Phe Leu Gly Leu Val His Leu Gly Gln Leu Leu Ile Phe His
 35 40 45
 Ile Tyr Leu Ser Met Ser Pro Thr Leu Ser Pro Arg Ser Pro Gln
 50 55 60
 Gly Trp Val Val Arg Ala Ala His Leu Thr Pro Leu Leu Glu Tyr
 65 70 75
 Val Pro Asn Pro Glu Pro Pro Thr Pro Gly Ala Arg Val Phe Val
 80 85 90
 Pro Arg Val Arg Met Cys Ser Gly Ser Ala Ser Pro Arg Ser Glu
 95 100 105
 Ile Met Asp Lys Lys Gly Lys Ser Gln Glu Glu Ile Lys Ser Met
 110 115 120
 Arg Thr Gln Gln Ala Gln Gln Glu Ala Glu Leu Thr Pro Arg Pro
 125 130 135
 Ala Gly Val Val Pro Gly Ala
 140

<210> 271
 <211> 1484
 <212> DNA
 <213> Homo sapiens

<400> 271
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 accatggcca agatggagct ctcgaggcc ttctctggcc agcgacact 100
 cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150
 tgcctcagaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
 tgcgagaaa gtctggcagc caagtgcttt gacatgccag tgtccctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctggggatga cgggttctcc ttccggagct tcgggagtg catgtggcta 350
 tctctgtagg aaactgtgga agaaccaggg gagaggtgcc gaagtctcat 400
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450
 ccacgttgca agggcccatgt caccccaactc tccgatttgg agggaagcgg 500
 ttgatggaga aggcttccct cccctccctc cccttggggc ttgtgggcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600
 ttcatcagct tctcctgct actaacagac ttgctactca ctgggaaacc 650
 tgctctgggg ctcaaaactga gcgcctttgc tgcgtgttcc tctgtcctgt 700
 cagggtctct ggggatggtg gccacatga tgtattcaca agtcttccaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
 tggctggggc ttctacatgg cctggctctc cttcacctgc tgcattggcg 850
 cggctgtcac caccttcaac acgtacacca ggatggtgct ggagttcaag 900
 tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950
 ccatcagtg ttccctcggc ggctgtcaag tgcagccccc accgtgggtc 1000
 ctttgaccag ctaccaccag tatcataato agcccatcca ctctgtctct 1050
 gagggagtcg acttctactc cgagctgcgg aacaagggat ttcaagagg 1100
 ggccagccag gagctgaaag aagcagttag gtcatctgta gaggaagagc 1150
 agtgtagga gtttaagcggg tttggggagt aggcctgagc cctaccttac 1200
 acgtctctg attatcaaca tgtgcttaag ccaacatccg tctcttgagc 1250
 atgggtttta gaggctacga ataaggctat gaataagggt tatctttaag 1300
 tcctaaggga ttccctgggtg ccaactgctc ctttccctc acagctccat 1350
 cttgtttcac ccaccccaca tctcacacat ccagaattcc cttctttact 1400
 gatagtttct gtgccagggt ctgggctaaa ccatggagat aaaaagaaga 1450
 gtaaaataca ctccccgacc ttaaggatct gaaa 1484

<210> 272
 <211> 285
 <212> PRT
 <213> Homo sapiens

<400> 272
 Met Ala Lys Met Glu Leu Ser Lys Ala Phe Ser Gly Gln Arg Thr
 1 5 10
 Leu Leu Ser Ala Ile Leu Ser Met Leu Ser Leu Ser Phe Ser Thr
 20 25 30
 Thr Ser Leu Leu Ser Asn Tyr Trp Phe Val Gly Thr Gln Lys Val

35										40										45									
Pro	Lys	Pro	Leu	Cys	Glu	Lys	Gly	Leu	Ala	Ala	Lys	Cys	Phe	Asp															
				50					55					60															
Met	Pro	Val	Ser	Leu	Asp	Gly	Asp	Thr	Asn	Thr	Ser	Thr	Gln	Glu															
				65					70					75															
Val	Val	Gln	Tyr	Asn	Trp	Glu	Thr	Gly	Asp	Asp	Arg	Phe	Ser	Phe															
				80					85					90															
Arg	Ser	Phe	Arg	Ser	Gly	Met	Trp	Leu	Ser	Cys	Glu	Glu	Thr	Val															
				95					100					105															
Glu	Glu	Pro	Gly	Glu	Arg	Cys	Arg	Ser	Phe	Ile	Glu	Leu	Thr	Pro															
				110					115					120															
Pro	Ala	Lys	Arg	Gly	Glu	Lys	Gly	Leu	Leu	Glu	Phe	Ala	Thr	Leu															
				125					130					135															
Gln	Gly	Pro	Cys	His	Pro	Thr	Leu	Arg	Phe	Gly	Gly	Lys	Arg	Leu															
				140					145					150															
Met	Glu	Lys	Ala	Ser	Leu	Pro	Ser	Pro	Pro	Leu	Gly	Leu	Cys	Gly															
				155					160					165															
Lys	Asn	Pro	Met	Val	Ile	Pro	Gly	Asn	Ala	Asp	His	Leu	His	Arg															
				170					175					180															
Thr	Ser	Ile	His	Gln	Leu	Pro	Pro	Ala	Thr	Asn	Arg	Leu	Ala	Thr															
				185					190					195															
His	Trp	Glu	Pro	Cys	Leu	Trp	Ala	Gln	Thr	Glu	Arg	Leu	Cys	Cys															
				200					205					210															
Cys	Phe	Leu	Cys	Pro	Val	Arg	Ser	Pro	Gly	Asp	Gly	Gly	Pro	His															
				215					220					225															
Asp	Val	Phe	Thr	Ser	Leu	Pro	Ser	Asp	Cys	Gln	Leu	Gly	Ser	Arg															
				230					235					240															
Arg	Leu	Glu	Thr	Thr	Cys	Leu	Glu	Leu	Trp	Leu	Gly	Leu	Leu	His															
				245					250					255															
Gly	Leu	Ala	Leu	Leu	His	Leu	Leu	His	Gly	Val	Gly	Cys	His	His															
				260					265					270															
Leu	Gln	His	Val	His	Gln	Asp	Gly	Ala	Gly	Val	Gln	Val	Gln	Ala															
				275					280					285															

<210> 273
 <211> 1158
 <212> DNA
 <213> Homo sapiens

<400> 273
 aactggaag aaagaaagaa aggtcagctt tggccacagat gtggttaccc 50
 cttgtgtccc tgtctttatg tctttctcct ctccctattc tgcacatccc 100
 ctacacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150
 ctctggttagc cttcagagca aacaggacaa cctatgttat ggatgtttcc 200

accaaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250
 tctctatgac agagccactt ctccacctct gaaatgttc ctcgtctgaa 300
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350
 cctgccotat tctctctccc aagtctgttc tcttattgtc aacctcagca 400
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450
 tgggcagatt accatgcaag cccagggaga aatggaggag cttttagtcc 500
 acctcctgt cagccagtat taacatgtcc ccttccccct gccccgcgt 550
 agattcagga cattcgcccc tgtgtgccac caaaccagga ctttccccct 600
 ggcttgcatg ccctggctct ctctgtgtac ccagcaagac gtctgttcca 650
 gggcagtgta gcatctttca agctccgtta ctatggcgat ggccatgatg 700
 ttacaatccc acttgctga ataataaagt gggaagggga agcagagggga 750
 aatggggcca tgtaatgca gctgctctgt tctccctacc ctgaggaaaa 800
 accaaaggga agcaacagga acttctgcaa ctgggtttta tcggaagat 850
 catcctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900
 agattgatga aagtgcaggt gtgtaaggaa atagaacagt ctgctgggag 950
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtccact 1000
 cagcctcccc gtagccatct ccagggtgac ggaaccagat gtattacctg 1050
 ctggaaccaa gaaaactaac aatgtaggtt actagtgaat accccaatgg 1100
 tttctccaat tatgcccag ccacccaaac aataaaacaa aattctctaa 1150
 cactgaaa 1158

<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

Met	Trp	Leu	Pro	Leu	Gly	Leu	Leu	Ser	Leu	Cys	Leu	Ser	Pro	Leu
1				5					10					15
Pro	Ile	Leu	Ser	Ser	Pro	Ser	Leu	Lys	Ser	Gln	Ala	Cys	Gln	Gln
				20					25					30
Leu	Leu	Trp	Thr	Leu	Pro	Ser	Pro	Leu	Val	Ala	Phe	Arg	Ala	Asn
				35					40					45
Arg	Thr	Thr	Tyr	Val	Met	Asp	Val	Ser	Thr	Asn	Gln	Gly	Ser	Gly
				50					55					60
Met	Glu	His	Arg	Asn	His	Leu	Cys	Phe	Cys	Asp	Leu	Tyr	Asp	Arg
				65					70					75
Ala	Thr	Ser	Pro	Pro	Leu	Lys	Cys	Ser	Leu	Leu				
				80					85					

<210> 275
 <211> 2694
 <212> DNA
 <213> Homo sapiens

<400> 275
 gtacgcgctc ttgggtctcc cggctgccgc tgctgccgcc gccgcctcgg 50
 gtcgtggagc caggagcgac gtcaccgccca tggcaggcat caaagctttg 100
 attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
 atgtgccctt ccaatataca acaaatactg gccctctttt gttctatatt 200
 tttacatcct ttcacctatt ccatactgca tagcaagaag attagtggat 250
 gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
 aacgggcatt gtcgtgtcag cttttggaact cctatttgta tttgccagag 350
 cacatctgat tgagtgggga gcttgtgcac ttgttctcac aggaacacac 400
 gtcactcttg caactatact aggccttttc ttggtctttg gaagcaatga 450
 cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500
 atggacttcc tgtcatttgt tggccattca cgcacacagg agatggggca 550
 gttaatgctg aatgggtatag caagcctctt gggggatttt tagtgctccc 600
 cttctcactt ttattgtaag catactatct tcacagagac ttgctgaagg 650
 attaaaagga ttttctcttt tggaaaagct tgactgattt cacacttato 700
 tatagtatgc ttttttggtt gtccctgctga atttaaatat ttatgtgttt 750
 ttcctgttag gttgattttt ttggaatca atatgcaatg ttaaacactt 800
 ttttaatgta atcatttgca ttggttagga attcagaatt cgcgcggctc 850
 tattactggt caagtacatc ttttctctta aaattattta gccctcatta 900
 ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950
 cccaatgtta tgcagacata cagacgggtg gcatacgta tagactgtat 1000
 actcagtga aatatagctg catttatacc tcagaggggc caagtgttaa 1050
 tgcccattgc ctccgttaag ggttgttggt ttactggga gacagatgtt 1100
 ttgtggattg aaaattattt tatggaattg ctacagagga gtgcttttct 1150
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<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

Met	Ala	Gly	Ile	Lys	Ala	Leu	Ile	Ser	Leu	Ser	Phe	Gly	Gly	Ala
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Ile	Gly	Leu	Met	Phe	Leu	Met	Leu	Gly	Cys	Ala	Leu	Pro	Ile	Tyr
			20						25				30	
Asn	Lys	Tyr	Trp	Pro	Leu	Phe	Val	Leu	Phe	Phe	Tyr	Ile	Leu	Ser

	35		40		45
Pro Ile Pro Tyr	Cys Ile Ala Arg Arg	Leu Val Asp Asp Thr Arg			
	50		55		60
Ala Met Ser Asn	Ala Cys Lys Glu Leu Ala	Ile Phe Leu Thr Thr			
	65		70		75
Gly Ile Val Val	Ser Ala Phe Gly Leu	Pro Ile Val Phe Ala Arg			
	80		85		90
Ala His Leu Ile	Glu Trp Gly Ala Cys	Ala Leu Val Leu Thr Gly			
	95		100		105
Asn Thr Val Ile	Phe Ala Thr Ile Leu	Gly Phe Phe Leu Val Phe			
	110		115		120
Gly Ser Asn Asp	Asp Phe Ser Trp Gln	Gln Trp			
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<210> 277

<211> 4104

<212> DNA

<213> Homo sapiens

<400> 277

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cacactgcct ggtggagggg aggagcccg gcgcctctcg cgcctccccg 150

cgccgcgcgc cgcacctccc caccgcccgc cgccgcgcgc cgccgcgcgc 200

caaagcatga gtgagcccg tctctgcagc tgcccggggc gcgaatggca 250

ggctgtttcc gcggagtaaa aggtggcgcc ggtcagtggc cgtttccaat 300

gacggacatt aaccagactg tcagatcctg gggagtgcgc agccccgagt 350

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<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

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Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln
				20					25					30
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys
				35					40					45
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala
				50					55					60
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn
				65					70					75
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln
				80					85					90
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln
				95					100					105
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu
				110					115					120
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro
				125					130					135
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln
				140					145					150
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr
				155					160					165
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile
				170					175					180
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn
				185					190					195
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys
				200					205					210
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn
				215					220					225
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu
				230					235					240
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val
				245					250					255
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr
				260					265					270
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu
				275					280					285

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu
				290					295					300
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu
				305					310					315
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser
				320					325					330
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro
				335					340					345
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe
				350					355					360
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu
				365					370					375
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser
				380					385					390
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr
				395					400					405
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu
				410					415					420
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu
				425					430					435
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp
				440					445					450
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val
				455					460					465
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met
				470					475					480
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn
				485					490					495
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys
				500					505					510
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val			
				515					520					

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

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<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280
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 cacggacttc gacgtgcgag ccaactggag ccagaaccgg accccgtgcg 150
 ccggcgccgc cgttgagttc ccggcggaca agatggtgtc agtcctgggtg 200
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<210> 281

<211> 229

<212> PRT

<213> Homo sapiens

<400> 281

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Leu	Thr	Gln	Ala	Val	Ser	Lys	Leu	Trp	Val	Pro	Asn	Thr	Asp	Phe
				20					25					30
Asp	Val	Ala	Ala	Asn	Trp	Ser	Gln	Asn	Arg	Thr	Pro	Cys	Ala	Gly
				35					40					45
Gly	Ala	Val	Glu	Phe	Pro	Ala	Asp	Lys	Met	Val	Ser	Val	Leu	Val
				50					55					60
Gln	Glu	Gly	His	Ala	Val	Ser	Asp	Met	Leu	Leu	Pro	Leu	Asp	Gly
				65					70					75
Glu	Leu	Val	Leu	Ala	Ser	Gly	Ala	Gly	Phe	Gly	Val	Ser	Asp	Val
				80					85					90
Gly	Ser	His	Leu	Asp	Cys	Gly	Ala	Gly	Glu	Pro	Ala	Val	Phe	Arg
				95					100					105
Asp	Ser	Asp	Arg	Phe	Ser	Trp	His	Asp	Pro	His	Leu	Trp	Arg	Ser
				110					115					120
Gly	Asp	Glu	Ala	Pro	Gly	Leu	Phe	Phe	Val	Asp	Ala	Glu	Arg	Val
				125					130					135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe
140 145

Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser
155 160 165

Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala
170 175 180

Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro
185 190 195

Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly
200 205 210

Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala
215 220 225

Leu Leu Gln Pro

<210> 282
<211> 644
<212> DNA
<213> Homo sapiens

<400> 282
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cttgacacta tcttctgcat ttgagcttct ttggcattga cgtggtagac 200
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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
<211> 77
<212> PRT
<213> Homo sapiens

<400> 283
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Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe					
	35		40		45
Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe					
	50		55		60
Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys					
	65		70		75

Leu Ala

<210> 284
 <211> 2623
 <212> DNA
 <213> Homo sapiens

<400> 284
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 gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200
 ccagatagat tatcttacac tgaactgatc aagtactttg aaaaatgactt 250
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<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

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Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val
				20					25					30
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys
				35					40					45
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His
				50					55					60
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn
				65					70					75
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile
				80					85					90
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser
				95					100					105
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala
				110					115					120
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly
				125					130					135
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe
				140					145					150
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp
				155					160					165
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile
				170					175					180
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His
				185					190					195
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp
				200					205					210
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala
				215					220					225
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly
				230					235					240
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr
				245					250					255
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala
				260					265					270
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala
				275					280					285
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp

290	295	300
Val Pro Glu Arg Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro	
305	310	315
Ile Ile Ala Val Ala Asp Glu Gly Trp	His Ile Leu Gln Asn Lys	
320	325	330
Ser Asp Asp Phe Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala Leu	
335	340	345
Ala Asp Met His Pro Ile Phe Leu Ala	His Gly Pro Ala Phe Arg	
350	355	360
Lys Asn Phe Ser Lys Glu Ala Met Asn	Ser Thr Asp Leu Tyr Pro	
365	370	375
Leu Leu Cys His Leu Leu Asn Ile Thr	Ala Met Pro His Asn Gly	
380	385	390
Ser Phe Trp Asn Val Gln Asp Leu Leu	Asn Ser Ala Met Pro Arg	
395	400	405
Val Val Pro Tyr Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser Val	
410	415	420
Lys Pro Ala Glu Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe Ile	
425	430	435
Gly Val Ser Leu Gly Ser Ile Ile Val	Ile Val Phe Phe Val Ile	
440	445	450
Phe Ile Lys His Leu Ile His Ser Gln	Ile Pro Ala Leu Gln Asp	
455	460	465
Met His Ala Glu Ile Ala Gln Pro Leu	Leu Gln Ala	
470	475	

<210> 286

<211> 1337

<212> DNA

<213> Homo sapiens

<400> 286

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 aacagggaca tggccacctg ggacgaaaag gcagtcaccc gcagggccaa 250
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<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Thr	Trp	Asp	Glu	Lys	Ala	Val	Thr	Arg	Arg	Ala	Lys	Val
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Ala	Pro	Ala	Glu	Arg	Met	Ser	Lys	Phe	Leu	Arg	His	Phe	Thr	Val
			20						25					30
Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp
			35					40						45
Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr	
			50					55						60
Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Ala	Pro	Asp	Val	Ala
			65					70						75
Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly
			80					85						90
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile
			95					100						105
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu
			110					115						120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala
				125					130					135
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe
				140					145					150
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser
				155					160					165
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val
				170					175					180
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe
				185					190					195
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala
				200					205					210
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu
				215					220					225
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala
				230					235					240
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp
				245					250					255

<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

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aagaagctga ggctggtgtt taagattttg gacaaaaaga atgatggagc 350

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<210> 289

<211> 469

<212> PRT

<213> Homo sapiens

<400> 289

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Thr	Glu	Phe	Gln	Tyr	Phe	Glu	Ser	Lys	Gly	Leu	Pro	Ala	Glu	Leu
			20						25					30
Lys	Ser	Ile	Phe	Lys	Leu	Ser	Val	Phe	Ile	Pro	Ser	Gln	Glu	Phe
			35						40					45
Ser	Thr	Tyr	Arg	Gln	Trp	Lys	Gln	Lys	Ile	Val	Gln	Ala	Gly	Asp
			50						55					60
Lys	Asp	Leu	Asp	Gly	Gln	Leu	Asp	Phe	Glu	Glu	Phe	Val	His	Tyr
			65						70					75
Leu	Gln	Asp	His	Glu	Lys	Lys	Leu	Arg	Leu	Val	Phe	Lys	Ile	Leu
			80						85					90

Asp Lys Lys Asn	Asp Gly Arg Ile Asp	Ala Gln Glu Ile Met Gln
95		105
Ser Leu Arg Asp	Leu Gly Val Lys Ile Ser	Glu Gln Gln Ala Glu
110		120
Lys Ile Leu Lys	Ser Met Asp Lys Asn	Gly Thr Met Thr Ile Asp
125		135
Trp Asn Glu Trp	Arg Asp Tyr His Leu	Leu His Pro Val Glu Asn
140		150
Ile Pro Glu Ile	Ile Leu Tyr Trp Lys	His Ser Thr Ile Phe Asp
155		165
Val Gly Glu Asn	Leu Thr Val Pro Asp	Glu Phe Thr Val Glu Glu
170		180
Arg Gln Thr Gly	Met Trp Trp Arg His	Leu Val Ala Gly Gly Gly
185		195
Ala Gly Ala Val	Ser Arg Thr Cys Thr	Ala Pro Leu Asp Arg Leu
200		210
Lys Val Leu Met	Gln Val His Ala Ser	Arg Ser Asn Asn Met Gly
215		225
Ile Val Gly Gly	Phe Thr Gln Met Ile	Arg Glu Gly Gly Ala Arg
230		240
Ser Leu Trp Arg	Gly Asn Gly Ile Asn	Val Leu Lys Ile Ala Pro
245		255
Glu Ser Ala Ile	Lys Phe Met Ala Tyr	Glu Gln Ile Lys Arg Leu
260		270
Val Gly Ser Asp	Gln Glu Thr Leu Arg	Ile His Glu Arg Leu Val
275		285
Ala Gly Ser Leu	Ala Gly Ala Ile Ala	Gln Ser Ser Ile Tyr Pro
290		300
Met Glu Val Leu	Lys Thr Arg Met Ala	Leu Arg Lys Thr Gly Gln
305		315
Tyr Ser Gly Met	Leu Asp Cys Ala Arg	Arg Ile Leu Ala Arg Glu
320		330
Gly Val Ala Ala	Phe Tyr Lys Gly Tyr	Val Pro Asn Met Leu Gly
335		345
Ile Ile Pro Tyr	Ala Gly Ile Asp Leu	Ala Val Tyr Glu Thr Leu
350		360
Lys Asn Ala Trp	Leu Gln His Tyr Ala	Val Asn Ser Ala Asp Pro
365		375
Gly Val Phe Val	Leu Leu Ala Cys Gly	Thr Met Ser Ser Thr Cys
380		390
Gly Gln Leu Ala	Ser Tyr Pro Leu Ala	Leu Val Arg Thr Arg Met
395		405

Gln Ala Gln Ala Ser Ile Glu Gly Ala Pro Glu Val Thr Met Ser
 410 415 420

Ser Leu Phe Lys His Ile Leu Arg Thr Glu Gly Ala Phe Gly Leu
 425 430 435

Tyr Arg Gly Leu Ala Pro Asn Phe Met Lys Val Ile Pro Ala Val
 440 445 450

Ser Ile Ser Tyr Val Val Tyr Glu Asn Leu Lys Ile Thr Leu Gly
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Val Gln Ser Arg

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

<400> 290
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<210> 291

<211> 282

<212> PRT

<213> Homo sapiens

<400> 291

Met	Ala	Ser	Leu	Gly	Gln	Ile	Leu	Phe	Trp	Ser	Ile	Ile	Ser	Ile	1	5	10	15
Ile	Ile	Ile	Leu	Ala	Gly	Ala	Ile	Ala	Leu	Ile	Ile	Gly	Phe	Gly	20	25	30	
Ile	Ser	Gly	Arg	His	Ser	Ile	Thr	Val	Thr	Thr	Val	Ala	Ser	Ala	35	40	45	
Gly	Asn	Ile	Gly	Glu	Asp	Gly	Ile	Leu	Ser	Cys	Thr	Phe	Glu	Pro	50	55	60	
Asp	Ile	Lys	Leu	Ser	Asp	Ile	Val	Ile	Gln	Trp	Leu	Lys	Glu	Gly	65	70	75	
Val	Leu	Gly	Leu	Val	His	Glu	Phe	Lys	Glu	Gly	Lys	Asp	Glu	Leu	80	85	90	
Ser	Glu	Gln	Asp	Glu	Met	Phe	Arg	Gly	Arg	Thr	Ala	Val	Phe	Ala	95	100	105	
Asp	Gln	Val	Ile	Val	Gly	Asn	Ala	Ser	Leu	Arg	Leu	Lys	Asn	Val	110	115	120	
Gln	Leu	Thr	Asp	Ala	Gly	Thr	Tyr	Lys	Cys	Tyr	Ile	Ile	Thr	Ser	125	130	135	
Lys	Gly	Lys	Gly	Asn	Ala	Asn	Leu	Glu	Tyr	Lys	Thr	Gly	Ala	Phe	140	145	150	
Ser	Met	Pro	Glu	Val	Asn	Val	Asp	Tyr	Asn	Ala	Ser	Ser	Glu	Thr				

155	160	165
Leu Arg Cys Glu Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val	Val
170	175	180
Trp Ala Ser Gln Val Asp Gln Gly Ala	Asn Phe Ser Glu Val Ser	
185	190	195
Asn Thr Ser Phe Glu Leu Asn Ser Glu	Asn Val Thr Met Lys Val	
200	205	210
Val Ser Val Leu Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser Cys	
215	220	225
Met Ile Glu Asn Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys Val	
230	235	240
Thr Glu Ser Glu Ile Lys Arg Arg Ser	His Leu Gln Leu Leu Asn	
245	250	255
Ser Lys Ala Ser Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser Trp	
260	265	270
Ala Leu Leu Pro Leu Ser Pro Tyr Leu	Met Leu Lys	
275	280	

<210> 292

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 292

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tgaagcgggc ctccgccggc ctgcagcggg ttcatgagcc gacctggggc 150

cagcagttgc tacaggagat gaagaccctc ttcttgaata ctgagtacct 200

gatgcccttt ctctcaacc agtgtggatc cttctctat tacctcacct 250

tggcatcgac agatctgacc ctggctgtgc ccatctgtaa ctctctggct 300

atcatcttca cactgattgt tgggaaggcc cttggagaag atattggtg 350

aaaacgtaag ttgactact gcgagtgagg gacgcagctc tgtggatctc 400

gacataacctg tggtagttcc ttcccagaac ccatctcccc agagtgggtg 450

aggacacggc cttttcccat cctgcccttt cctctgcagc tgttttgctt 500

ccttgtggcc atcagagttc ctttccctg gacagtgctg agaagacag 550

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gccctgtacc agctcctact ggcatggctg agctcagacc ctctcgattt 650

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 aacctttctg cccagcagc tctcttctgt ctaacatctc aggctcccag 1050
 cccagccacc attactgtgg cctgatctgg actatcatgg tggcaggttc 1100
 catggactgc agaactccag ctgcatggaa agggccagct gcagactttg 1150
 agccagaaat gcaaacggga ggccctctgg actcagtcag agcgcttttg 1200
 ctgaatgagg ggtggaaccg agggaagaag gtgcgtcgga gtggcagatg 1250
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 agaaatcctc actgccagcc cctcttaaac aggtagagag ctgtgagccc 1350
 cagccccacc tgactccagc acacctggcg agtagtagct gtcaataaat 1400
 ctatgtaaac agacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1450
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 1484

<210> 293

<211> 180

<212> PRT

<213> Homo sapiens

<400> 293

Met	Ala	Ala	Ser	Leu	Gly	Gln	Val	Leu	Ala	Leu	Val	Leu	Val	Ala	15
1				5				10							
Ala	Leu	Trp	Gly	Gly	Thr	Gln	Pro	Leu	Leu	Lys	Arg	Ala	Ser	Ala	30
			20					25							
Gly	Leu	Gln	Arg	Val	His	Glu	Pro	Thr	Trp	Ala	Gln	Gln	Leu	Leu	45
			35					40							
Gln	Glu	Met	Lys	Thr	Leu	Phe	Leu	Asn	Thr	Glu	Tyr	Leu	Met	Pro	60
			50					55							
Phe	Leu	Leu	Asn	Gln	Cys	Gly	Ser	Leu	Leu	Tyr	Tyr	Leu	Thr	Leu	75
			65					70							
Ala	Ser	Thr	Asp	Leu	Thr	Leu	Ala	Val	Pro	Ile	Cys	Asn	Ser	Leu	90
			80					85							
Ala	Ile	Ile	Phe	Thr	Leu	Ile	Val	Gly	Lys	Ala	Leu	Gly	Glu	Asp	105
			95					100							
Ile	Gly	Gly	Lys	Arg	Lys	Leu	Asp	Tyr	Cys	Glu	Cys	Gly	Thr	Gln	120
			110					115							
Leu	Cys	Gly	Ser	Arg	His	Thr	Cys	Val	Ser	Ser	Phe	Pro	Glu	Pro	135
			125					130							
Ile	Ser	Pro	Glu	Trp	Val	Arg	Thr	Arg	Pro	Phe	Pro	Ile	Leu	Pro	150
			140					145							

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro
155 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
170 180

<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

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cggcctaaga tgccacttct tctcatgtcc caggcttgag gccctgtggt 200
cccatcctct gggagaagtc agctccagca ccatgaaggg catcctcggt 250
gctggtatca ctgcagtgtc tgttgagct gtagaatctc tgagctgcgt 300
gcagtgtaat tcatgggaaa aatcctgtgt caacagcatt gcctctgaat 350
gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400
ctagagacac cagtcagatt ataccagaat atgttctgtct cagcggagaa 450
ctgcagttag gagacacaca ttacagcctt cactgtccac gtgtctgtg 500
aagaacactt tcattttgta agccagtgtc gccaaaggaaa ggaatgcagc 550
aacaccagcg atgccctgga cctccctctg aagaacgtgt ccagcaacgc 600
agagtgcctt gcttgttatg aatctaattg aacttctgtc cgtgggaagc 650
cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700
aagaatgaca ttgagtctaa gagtctctgt ctgaaaggct gttccaacgt 750
cagtaacgcc acctgtcagt tcctgtctgt tgaaaacaag actcttgag 800
gagtcacttt tcgaaagttt gagtgtgcaa atgtaaacag cttaaccccc 850
acgtctgcac caaccacttc ccacaacgtg ggctccaaag ctccctcta 900
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agcaccctct gcggtgctga caccctctt cctgtctctg cccggtttaa 1050
ctgccagta agtgggagtc acaggtctcc aggcaatgcc gacagctgcc 1100
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aaaaaaaaaa aaaa 1164

<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

Met	Lys	Gly	Ile	Leu	Val	Ala	Gly	Ile	Thr	Ala	Val	Leu	Val	Ala
1				5					10					15
Ala	Val	Glu	Ser	Leu	Ser	Cys	Val	Gln	Cys	Asn	Ser	Trp	Glu	Lys
				20					25					30
Ser	Cys	Val	Asn	Ser	Ile	Ala	Ser	Glu	Cys	Pro	Ser	His	Ala	Asn
				35					40					45
Thr	Ser	Cys	Ile	Ser	Ser	Ser	Ala	Ser	Ser	Ser	Leu	Glu	Thr	Pro
				50					55					60
Val	Arg	Leu	Tyr	Gln	Asn	Met	Phe	Cys	Ser	Ala	Glu	Asn	Cys	Ser
				65					70					75
Glu	Glu	Thr	His	Ile	Thr	Ala	Phe	Thr	Val	His	Val	Ser	Ala	Glu
				80					85					90
Glu	His	Phe	His	Phe	Val	Ser	Gln	Cys	Cys	Gln	Gly	Lys	Glu	Cys
				95					100					105
Ser	Asn	Thr	Ser	Asp	Ala	Leu	Asp	Pro	Pro	Leu	Lys	Asn	Val	Ser
				110					115					120
Ser	Asn	Ala	Glu	Cys	Pro	Ala	Cys	Tyr	Glu	Ser	Asn	Gly	Thr	Ser
				125					130					135
Cys	Arg	Gly	Lys	Pro	Trp	Lys	Cys	Tyr	Glu	Glu	Glu	Gln	Cys	Val
				140					145					150
Phe	Leu	Val	Ala	Glu	Leu	Lys	Asn	Asp	Ile	Glu	Ser	Lys	Ser	Leu
				155					160					165
Val	Leu	Lys	Gly	Cys	Ser	Asn	Val	Ser	Asn	Ala	Thr	Cys	Gln	Phe
				170					175					180
Leu	Ser	Gly	Glu	Asn	Lys	Thr	Leu	Gly	Gly	Val	Ile	Phe	Arg	Lys
				185					190					195
Phe	Glu	Cys	Ala	Asn	Val	Asn	Ser	Leu	Thr	Pro	Thr	Ser	Ala	Pro
				200					205					210
Thr	Thr	Ser	His	Asn	Val	Gly	Ser	Lys	Ala	Ser	Leu	Tyr	Leu	Leu
				215					220					225
Ala	Leu	Ala	Ser	Leu	Leu	Leu	Arg	Gly	Leu	Pro				
				230					235					

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

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ccagcccat ggtccccgcc gccggcgcgc tgctgtgggt cctgctgctg 150

aatctgggtc ccgggggcggc gggggcccaa ggctgaccc agactccgac 200
cgaatgcagc cgggtcagtt tacgctttgg gggcccatg accgcgagct 250
accggagcac cggccggact ggtcttcccc ggaagacaag gataatccta 300
gaggacgaga atgatgccat gggcgacgcc gaccgccttg ctggaccagc 350
ggctgcccag ctcttgcccg ccacgggtgc caccggcttt agccggtcgt 400
ccgccattaa cgaggaggat gggctctcag aagagggggg tgtgattaat 450
gccggaagg atagaccag cagagagctt ccagtgcca ctccaatac 500
agcggggagt tccagcacga ggtttatagc caatagtcag gagcctgaaa 550
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tcgggcacca tgagccggag ccggtctggg aagetgcacg gcctttccgg 800
gcgccttcga gttggggcgc tgagccagct ccgcacggag cacaagcctt 850
gcacctatca acaatgtccc tgcaaccgac ttcggaaga gtgccccctg 900
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agagatgcaa ccaatagaca gaaaccagag gtaatggcca cttcatccac 1150
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ccactagata tttttagtag agaaaaacaa aactggaaaa cacia 1245

<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

Met	Val	Pro	Ala	Ala	Gly	Ala	Leu	Leu	Trp	Val	Leu	Leu	Leu	Asn
1				5					10					15

Leu	Gly	Pro	Arg	Ala	Ala	Gly	Ala	Gln	Gly	Leu	Thr	Gln	Thr	Pro
				20				25						30

Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
				35				40						45

Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
				50				55						60

Arg Ile Ile Leu Glu Asp Glu Asn Asp Ala Met Ala Asp Ala Asp

	65	70	75
Arg Leu Ala Gly	Pro Ala Ala Ala Glu	Leu Leu Ala Ala Thr	Val
	80	85	90
Ser Thr Gly Phe	Ser Arg Ser Ser Ala	Ile Asn Glu Glu Asp	Gly
	95	100	105
Ser Ser Glu Glu	Gly Val Val Ile Asn	Ala Gly Lys Asp Ser	Thr
	110	115	120
Ser Arg Glu Leu	Pro Ser Ala Thr Pro	Asn Thr Ala Gly Ser	Ser
	125	130	135
Ser Thr Arg Phe	Ile Ala Asn Ser Gln	Glu Pro Glu Ile Arg	Leu
	140	145	150
Thr Ser Ser Leu	Pro Arg Ser Pro Gly	Arg Ser Thr Glu Asp	Leu
	155	160	165
Pro Gly Ser Gln	Ala Thr Leu Ser Gln	Trp Ser Thr Pro Gly	Ser
	170	175	180
Thr Pro Ser Arg	Trp Pro Ser Pro Ser	Pro Thr Ala Met Pro	Ser
	185	190	195
Pro Glu Asp Leu	Arg Leu Val Leu Met	Pro Trp Gly Pro Trp	His
	200	205	210
Cys His Cys Lys	Ser Gly Thr Met Ser	Arg Ser Arg Ser Gly	Lys
	215	220	225
Leu His Gly Leu	Ser Gly Arg Leu Arg	Val Gly Ala Leu Ser	Gln
	230	235	240
Leu Arg Thr Glu	His Lys Pro Cys Thr	Tyr Gln Gln Cys Pro	Cys
	245	250	255
Asn Arg Leu Arg	Glu Glu Cys Pro Leu	Asp Thr Ser Leu Cys	Thr
	260	265	270
Asp Thr Asn Cys	Ala Ser Gln Ser Thr	Thr Ser Thr Arg Thr	Thr
	275	280	285
Thr Thr Pro Phe	Pro Thr Ile His Leu	Arg Ser Ser Pro Ser	Leu
	290	295	300
Pro Pro Ala Ser	Pro Cys Pro Ala Leu	Ala Phe Trp Lys Arg	Val
	305	310	315
Arg Ile Gly Leu	Glu Asp Ile Trp Asn	Ser Leu Ser Ser Val	Phe
	320	325	330
Thr Glu Met Gln	Pro Ile Asp Arg Asn	Gln Arg	
	335	340	

<210> 298

<211> 2692

<212> DNA

<213> Homo sapiens

<400> 298

cccggtcgca cccacgcgtc cggggagaaa ggaatggccgg cctggcgcg 50

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 cgaccctgag ccggtgtacc ggcactgcgt actgcagtgc gaagagcaga 150
 actgctctgg gggcgctctg aatcacttcc gctcccacca gccaatctac 200
 atgagcttag caggctggac ctgtcgggac gactgtaagt atgagtgtat 250
 gtgggtcacc gttgggctct acctccagga aggtcacaaa gtgcctcagt 300
 tccatggcaa gtggcccttc tcccggttcc tgttctttca agagccggca 350
 tcggccgtgg cctcgcttct caatggcctg gccagcctgg tgatgctctg 400
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<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

Met	Ala	Gly	Leu	Ala	Ala	Arg	Leu	Val	Leu	Leu	Ala	Gly	Ala	Ala
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Ala	Leu	Ala	Ser	Gly	Ser	Gln	Gly	Asp	Arg	Glu	Pro	Val	Tyr	Arg
			20						25					30
Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala
			35						40					45
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala
				50					55					60
Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val
			65						70					75

Thr Val Gly Leu Tyr Leu Gln Glu Gly His Lys Val Pro Gln Phe	80	85	90
His Gly Lys Trp Pro Phe Ser Arg Phe Leu Phe Phe Gln Glu Pro	95	100	105
Ala Ser Ala Val Ala Ser Phe Leu Asn Gly Leu Ala Ser Leu Val	110	115	120
Met Leu Cys Arg Tyr Arg Thr Phe Val Pro Ala Ser Ser Pro Met	125	130	135
Tyr His Thr Cys Val Ala Phe Ala Trp Val Ser Leu Asn Ala Trp	140	145	150
Phe Trp Ser Thr Val Phe His Thr Arg Asp Thr Asp Leu Thr Glu	155	160	165
Lys Met Asp Tyr Phe Cys Ala Ser Thr Val Ile Leu His Ser Ile	170	175	180
Tyr Leu Cys Cys Val Arg Thr Val Gly Leu Gln His Pro Ala Val	185	190	195
Val Ser Ala Phe Arg Ala Leu Leu Leu Leu Met Leu Thr Val His	200	205	210
Val Ser Tyr Leu Ser Leu Ile Arg Phe Asp Tyr Gly Tyr Asn Leu	215	220	225
Val Ala Asn Val Ala Ile Gly Leu Val Asn Val Val Trp Trp Leu	230	235	240
Ala Trp Cys Leu Trp Asn Gln Arg Arg Leu Pro His Val Arg Lys	245	250	255
Cys Val Val Val Val Leu Leu Leu Gln Gly Leu Ser Leu Leu Glu	260	265	270
Leu Leu Asp Phe Pro Pro Leu Phe Trp Val Leu Asp Ala His Ala	275	280	285
Ile Trp His Ile Ser Thr Ile Pro Val His Val Leu Phe Phe Ser	290	295	300
Phe Leu Glu Asp Asp Ser Leu Tyr Leu Leu Lys Glu Ser Glu Asp	305	310	315
Lys Phe Lys Leu Asp	320		

<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

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cctctgggca tgcgtcttgg gctgctgatg gccgcctgct tcaacctctg 150

cctcagtcac cagaacctga aggagtttgc cctgaccaac ccagagaaga 200
 gcagcaccaa agaaacggag agaaaagaaa ccaaagccga ggaggagctg 250
 gatgccgaag tcctggaggt gtccaccgcg acgcatgagt ggagggccct 300
 tcagccaggg caggctgtcc ctgcaggatc ccacgtacgg ctgaattctc 350
 agactgggga aagagaggca aaactccaat atgaggacaa gtcccgaaat 400
 aatttgaag gcaaaaggct ggatatcaac accaacacct acacatctca 450
 ggatctcaag agtgactgga caaattcaa ggagggggca gagatggaga 500
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<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

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Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

290	295	300
Pro Tyr Ala Gln Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln Val	
305	310	315
Leu Arg Thr Leu Val Gln Glu Lys Gly Thr Glu Val Leu Ala Val		
320	325	330
Arg Val Val Thr Leu Leu Tyr Asp Leu	Val Thr Glu Lys Met Phe	
335	340	345
Ala Glu Glu Glu Ala Glu Leu Thr Gln	Glu Met Ser Pro Glu Lys	
350	355	360
Leu Gln Gln Tyr Arg Gln Val His Leu	Leu Pro Gly Leu Trp Glu	
365	370	375
Gln Gly Trp Cys Glu Ile Thr Ala His	Leu Leu Ala Leu Pro Glu	
380	385	390
His Asp Ala Arg Glu Lys Val Leu Gln Thr	Leu Gly Val Leu Leu	
395	400	405
Thr Thr Cys Arg Asp Arg Tyr Arg Gln	Asp Pro Gln Leu Gly Arg	
410	415	420
Thr Leu Ala Ser Leu Gln Ala Glu Tyr	Gln Val Leu Ala Ser Leu	
425	430	435
Glu Leu Gln Asp Gly Glu Asp Glu Gly Tyr Phe Gln Glu Leu Leu		
440	445	450
Gly Ser Val Asn Ser Leu Leu Lys Glu	Leu Arg	
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<210> 302

<211> 2136

<212> DNA

<213> Homo sapiens

<400> 302

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<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303

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				20					25					30	
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser	
				35					40					45	
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr	
				50					55					60	
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly	
				65					70					75	
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr	
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Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	
				95					100					105	
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	
				110					115					120	
Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	
				125					130					135	
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	
				140					145					150	
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	
				155					160					165	
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	
				170					175					180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	
				185					190					195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	
				200					205					210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	
				215					220					225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	
				230					235					240	
Arg	Ser	Leu	Leu	Cys	Lys	Asp									
				245											

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
 <222> 108, 123, 126, 154, 198, 206, 217
 <223> unknown base

<400> 304
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 aagatcaacc catttccatt ccgccagatg gcctatgttt ctggtctctc 100
 ccttcggnat catcagtggt gtntntctg ttatcaatat ttggctgat 150
 gcanttgggc caggtgtggt tgggatccat ggagactcac cctattantt 200
 cctganttca gccttntga cagcagccat tatectgctc 240

<210> 305
 <211> 378
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
 <223> unknown base

<400> 305
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 ctgcttaaga aggcagatga ggggttagca tngctgagtg aggacggaag 150
 atcacccatt tccatccgcc agatggccta tgtttntggt ntttccttcg 200
 gtatcatcag tgggtgtttn tctgttatca atattttggn tgatgcantt 250
 gggccaggtg tgggtgggat ccatggagan tcaccctatt aattcctgaa 300
 ttcagccttt ntgacagcag ccattatcct gntccatacc ttttggggag 350
 ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
 <211> 655
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1, 22, 129, 133, 184
 <223> unknown base

<400> 306
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 gcgttgccac cccacgcgga ctcccagnt gngcgccct tcccatttgc 150
 ctgtctcgtt caggccccca cccccttccc cacntgacca gccattgggg 200
 ctgcggtgtt tttcggctgc actttcgtcg cgttcggccc ggccttcgag 250

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 cgcaggggca tttttctggc tgggtctcct gctcctggcc tctgtggtct 350
 ggttcattctt ggtccatgtg accgaccggt cagatgcccc gctccagtac 400
 ggccctctga tttttggtgc tgctgtctct gtccctctac aggaggtggt 450
 ccgcttttgc tactacaagc tgcttaagaa ggcagatgag gggtttagcat 500
 cgctgagtga ggacggaaga tcacccatct ccatccgcca gatggcctat 550
 gttttctggtc tctccttogg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttggtc gatgcacttg ggcaggtgt ggttgggac catggagact 650
 ccccc 655

<210> 307
 <211> 650
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 52, 89, 128
 <223> unknown base

<400> 307
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 cgttgccacc ccacgcggaac tccccagntg gcgcgccct cccatttgcc 150
 tgtcctgtgc aggcgcccaac cccccttccc acctgaccag ccatgggggc 200
 tgcggtgttt ttogggtgc actttcgtcg cgttcgggcc cggccttcgc 250
 gcttttcttg atcaactgtg ctggggaccc gcttcgcgtt atcatctcg 300
 tcgcaggggc atttttctg ctggtctccc tgctcctggc ctctgtgtgc 350
 tggttcatct tgggtccatgt gaccgaccg tcagatgcc ggctccagta 400
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 tcgctgagtg aggacggaag atcacccatc tccatccgcc agatggccta 550
 tgtttctggt ctctccttog gtatcatcag tgggtgtctc tctgttatca 600
 atattttggc tgatgcactt gggccaggtg tgggtgggat ccatggagac 650

<210> 308
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 308
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 ctggtgaggg tggctcagca ggcagggaag gagaggtgtc tgtgctctct 200
 gcacccacat ctttctctgt ccctccttg ccctgtcttg aggtctctag 250
 actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgcgat 300
 ggtggccctg ctttgtgtt cctctctacc tggggaata aggtgcagcg 350
 gccatggcta cagcaagacc ccctggatg tgggtgctct gtctctgat 400
 cacagccttg cttctggggg tcacagagca tgttctcgcc aacaatgatg 450
 tttctgtga ccacccctct aacaccgtgc cctctgggag caaccaggac 500
 ctgggagctg gggccgggga agacgcccgg tcggatgaca gcagcagccg 550
 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600
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 ccacagtggc tgctcagggc cgccactgc aggaagaaag ttttcagagt 700
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 caaagtgtt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950
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 ctgagaagtg gaaaaaaaaa 1570

<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309

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Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn
				20					25					30
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly
				35					40					45
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser
				50					55					60
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met
				65					70					75
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln
				80					85					90
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr
				95					100					105
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His
				110					115					120
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln
				125					130					135
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His
				140					145					150
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro
				155					160					165
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser
				170					175					180
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser
				185					190					195
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser
				200					205					210
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile
				215					220					225
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser
				230					235					240
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu
				245					250					255
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn
				260					265					270
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile
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Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser							

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
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<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
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<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
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 agcgacatcc tggatgcctt gcagagggac cgggggcttg gccggccccc 650
 caacaaggcc gaccttcaga gagcgccctgc cgggggaacc cggcccccgg 700
 gctgtgccac tggctcccgg ccccagact gtctggacgt cctcctaagc 750
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 acatgcgcag 3010

<210> 314
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 314
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 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr
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 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val
 35 40 45
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro
 50 55 60
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala
 65 70 75
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu
 80 85 90
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe
 95 100 105

Ala Arg Leu Glu	Ser Ala Gln Ala Ser	Val Leu Gln Ala Leu	Thr
	110	115	120
Glu His Gln Ala	Gln Pro Arg Leu Val	Gly Asp Gln Glu Gln	Glu
	125	130	135
Leu Leu Asp Thr	Leu Ala Asp Gln Leu	Pro Arg Leu Leu Ala	Arg
	140	145	150
Ala Ser Glu Leu	Gln Thr Glu Cys Met	Gly Leu Arg Lys Gly	His
	155	160	165
Gly Thr Leu Gly	Gln Gly Leu Ser Ala	Leu Gln Ser Glu Gln	Gly
	170	175	180
Arg Leu Ile Gln	Leu Leu Ser Glu Ser	Gln Gly His Met Ala	His
	185	190	195
Leu Val Asn Ser	Val Ser Asp Ile Leu	Asp Ala Leu Gln Arg	Asp
	200	205	210
Arg Gly Leu Gly	Arg Pro Arg Asn Lys	Ala Asp Leu Gln Arg	Ala
	215	220	225
Pro Ala Arg Gly	Thr Arg Pro Arg Gly	Cys Ala Thr Gly Ser	Arg
	230	235	240
Pro Arg Asp Cys	Leu Asp Val Leu Leu	Ser Gly Gln Gln Asp	Asp
	245	250	255
Gly Val Tyr Ser	Val Phe Pro Thr His	Tyr Pro Ala Gly Phe	Gln
	260	265	270
Val Tyr Cys Asp	Met Arg Thr Asp Gly	Gly Gly Trp Thr Val	Phe
	275	280	285
Gln Arg Arg Glu	Asp Gly Ser Val Asn	Phe Phe Arg Gly Trp	Asp
	290	295	300
Ala Tyr Arg Asp	Gly Phe Gly Arg Leu	Thr Gly Glu His Trp	Leu
	305	310	315
Gly Leu Lys Arg	Ile His Ala Leu Thr	Thr Thr Gln Ala Ala	Tyr
	320	325	330
Leu His Val Asp	Leu Glu Asp Phe Glu	Asn Gly Thr Ala Tyr	Ala
	335	340	345
Arg Tyr Gly Ser	Phe Gly Val Gly Leu	Phe Ser Val Asp Pro	Glu
	350	355	360
Glu Asp Gly Tyr	Pro Leu Thr Val Ala	Asp Tyr Ser Gly Thr	Ala
	365	370	375
Gly Asp Ser Leu	Leu Lys His Ser Gly	Met Arg Phe Thr Thr	Lys
	380	385	390
Asp Arg Asp Ser	Asp His Ser Glu Asn	Asn Cys Ala Ala Phe	Tyr
	395	400	405
Arg Gly Ala Trp	Trp Tyr Arg Asn Cys	His Thr Ser Asn Leu	Asn
	410	415	420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
 425 430 435
 Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
 440 445 450
 Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
 455 460

<210> 315
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 315
 cacacgtcca acctcaatgg gcag 24

<210> 316
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 316
 gaccagcagg gccaaaggaca agg 23

<210> 317
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 317
 gttctctgag atgaagatcc ggccgggtccg ggagtaccgc ttag 44

<210> 318
 <211> 1841
 <212> DNA
 <213> Homo sapiens

<400> 318
 gcagtcagag acttcccctg ccctcgctg ggaaagaaca ttaggaatgc 50
 ctttttagtgc cttgcttcc tgaactagctc acagtagccc ggcggcccag 100
 ggcaatccga ccacatttca ctctaccgc tgtaggaatc cagatgcagg 150
 ccaagtacag cagcagcagg gacatgctgg atgatgatgg ggacaccacc 200
 atgagcctgc attctcaagc ctctgccaca actcggcacc cagagccccg 250
 gcgcacagag cacagggtc cctcttcaac gtggcgacca gtggccctga 300
 ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350
 cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacacat 400

ttctcaaatg gaagaaagat taggaaatac gtcccaagag ttgcaatctc 450
 ttcaagtcca gaatataaag cttgcaggaa gtctgcagca tgtggctgaa 500
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550
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 aagacagcaa aagttgggag gactgtaaat atttctgcct tagtgaaaaa 650
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgcccgcgc 700
 tcagagctac tctgagtttt tctactctta ttggacaggg cttttgccc 750
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 catgtccccc ctgaaacatt aggcgaaggt gactgattcg cctctgcgaa 1000
 ctacaaatag cagagtgcgc caggcgggtgc caaagcaagg gctagtgtag 1050
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 aaaatggggt ctcgtgtttc ctgttcagga tcaccagcat ttctgagcct 1150
 gggtttatgc acgtatttaa cagtcacaag aagtcttatt tacatgccac 1200
 caaccaacct cagaaaccca taatgtcatc tgccttcttg gcttagagat 1250
 aacttttagc tctcttctct ctcaatgtct aatatcacct cctgttttcc 1300
 atgtcttctt tacacttggt ggaataagaa actttttgaa gttagagaaa 1350
 tacattgagg taacatcctt ttctctgaca gtcaagtagt ccatcagaaa 1400
 ttggcagtc a t t c c c a g a t t g t a c c a g a a t a t t t t t 1450
 t g t t t g t t c a g t t c a t a c t a g t c c c t t c c a a t c a t c a g t a a g a c c c 1500
 c a t c t g c c t t g t c a t g c c g t t t c c a a c a g g g a t g t c a t t g a t a g a g 1550
 a a t c t c a a a t c t c a a t g c c t t a t a g c a t t c c t t c t g t g t o c a t t a a g a 1600
 c t c t g a t a a t t g t c t c c c c t c c a t a g g a a t t t c t c c a g g a a g a a a t a t 1650
 a t c c c a t c t c o g t t t c a t a t c a g a a c t a c c g t c c c g a t a t t c c t t c a 1700
 g a g a g a t t a a a g a c c a g a a a a a g t g a g c c t c t t c a t c t g c a c c t g t a a t 1750
 a g t t t c a g t t c c t a t t t t c t t c c a t t g a c c a t a t t t a t a c c t t t c a g t 1800
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<210> 319

<211> 280

<212> PRS

<213> Homo sapiens

<400> 319

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Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr
				20					25					30
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser
				35					40					45
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val
				50					55					60
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr
				65					70					75
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu
				80					85					90
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val
				95					100					105
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys
				110					115					120
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser
				125					130					135
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln
				140					145					150
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys
				155					160					165
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp
				170					175					180
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser
				185					190					195
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu
				200					205					210
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile
				215					220					225
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu
				230					235					240
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys
				245					250					255
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His
				260					265					270
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp					
				275					280					

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
 <221> unsure
 <222> 59, 95, 149, 331, 364, 438, 446
 <223> unknown base

 <400> 320
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 gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100
 cttttgccac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150
 cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200
 ggtgctgctg atagggtctg cagccctggg gcttttgttt tttcagtact 250
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 ttaggaaata cgtccaaga gttgcaattt nttcaagtcc agaataaaa 350
 gcttcgagga agntgcagc atgtggctga aaaactctgt cgtgagctgt 400
 ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450
 atacacacac cacttccc 468

<210> 321
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 321
 atgcaggcca agtacagcag cac 23

<210> 322
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 322
 catgctgacg acttcctgca agc 23

<210> 323
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 323
 ccacacagtc tctgcttctt ggg 23

<210> 324
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

atgctggatg atgatgggga caccaccatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50
gaggcgcgcg tccggggatt cggtcgcggc cgctggctct gctctgcggg 100
gagggagcgg gcccgcccgc ggggcccgcg cctccggat ccgcccctc 150
cccggtcccg cccctcggga gactcctctg gctgctctgg ggttcgcgcg 200
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caccctgcac agcccggcca ggccgcaaaa aaggccgtca ggaccgccta 550
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<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

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				20					25					30
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro
				35					40					45
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg
				50					55					60
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly
				65					70					75
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro
				80					85					90
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg
				95					100					105
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu
				110					115					120
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val
				125					130					135
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe
				140					145					150
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val
				155					160					165
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala
				170					175					180
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe
				185					190					195
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala
				200					205					210
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr
				215					220					225
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly
				230					235					240
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu
				245					250					255
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile
				260					265					270

Val Ser Ala Arg	Pro Asp Glu Trp	Leu Gly Arg Cys Ile Leu	Asp
	275	280	285
Ala Thr Gly Val	Gly Cys Thr Gly Asp	His Glu Gly Val His Tyr	
	290	295	300
Ser His Leu Glu	Leu Ser Pro Gly Glu	Pro Val Gln Glu Gly Asp	
	305	310	315
Pro His Phe Arg	Ser Ala Leu Thr Ala	His Pro Val Arg Asp Pro	
	320	325	330
Val His Met Tyr	Gln Leu His Lys Ala	Phe Ala Arg Ala Glu Leu	
	335	340	345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu	Leu Gln Trp Glu Ile Gln	
	350	355	360
Asn Thr Ser His	Leu Ala Val Asp Gly	Asp Arg Ala Ala Ala Trp	
	365	370	375
Pro Val Gly Ile	Pro Ala Pro Ser Arg	Pro Ala Ser Arg Phe Glu	
	380	385	390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu	Gln His Ala Phe Ser Cys	
	395	400	405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu	Arg Gly Ala Asp Arg Ala	
	410	415	420
Asp Val Ala Asp	Val Leu Gly Thr Ala	Leu Glu Glu Leu Asn Arg	
	425	430	435
Arg Tyr His Pro	Ala Leu Arg Leu Gln	Lys Gln Gln Leu Val Asn	
	440	445	450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg	Gly Met Glu Tyr Thr Leu	
	455	460	465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro	Gln Gly Gly Arg Arg Pro	
	470	475	480
Leu Thr Arg Arg	Val Gln Leu Leu Arg	Pro Leu Ser Arg Val Glu	
	485	490	495
Ile Leu Pro Val	Pro Tyr Val Thr Glu	Ala Ser Arg Leu Thr Val	
	500	505	510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg	Asp Leu Ala Pro Gly Phe	
	515	520	525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu	Glu Pro Gly Asp Ala Ala	
	530	535	540
Ala Ala Leu Thr	Leu Leu Leu Tyr	Gln Pro Arg Gln Ala Gln	
	545	550	555
Arg Val Ala His	Ala Asp Val Phe Ala	Pro Val Lys Ala His Val	
	560	565	570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly	Ala Arg Val Pro Trp Leu	
	575	580	585

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp	Leu
	590	595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala	Gly
	605	610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg	Met
	620	625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe	Gln
	635	640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro	Pro
	650	655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala	Ser
	665	670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly	Arg
	680	685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser	Leu
	695	700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val	Leu
	710	715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln	Thr
	725	730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu	Gln
	740	745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met	Leu
	755	760	765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser	Thr	
	770	775	

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 329
atggctcagt gtgcagacag 20

<210> 330
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 330
gcattgctgct ccgtgaagta gtcc 24

<210> 331
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 331
atgcatggga aagaaggcct gccc 24

<210> 332
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 332
tgcaactgggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 333
gctctggccg gccccggcga ttggtcaccg cccgctaggg gacagccctg 50
gctctctctg attggcaagc gctggccacc tccccacacc ccttgcgaa 100
gctccocctag tggagaaaag gagtagctat tagccaattc ggcaggggcc 150
gcttttttaga agottgattt cctttgaaga tgaaagacta gcggaagctc 200
tgctctcttc cccagtgggc gagggaaactc ggggcgattg gctgggaact 250
gtatccacc aaatgtcacc gatttcttc tatgcaggaa atgagcagac 300
ccatcaataa gaaatttctc agcctgggccc aaaatggttg gcccaacgaa 350
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gactcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag gcgggggcat 450
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500
 ccgcccctga gaccctgcag caccatctgt catggcggct gggctgtttg 550
 gtttgagcgc tcgccgtctt ttggcggcag cggcgacgcg agggctcccc 600
 gccgcccgcg tccgctggga atctagcttc tccaggactg tggtcgcccc 650
 gtcgctgtgt gcgggaaagc ggcccccaga accgaccaca ccgtggcaag 700
 aggaccaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750
 catggttatg acaaggaccc cgttttggac gtctggaaca tgcgacttgt 800
 cttctctttt ggcgctctca tcctcctggt ccttggcagc acctttgtg 850
 cctatctgcc tgactacagg atgaaagagt ggtcccgccg cgaagctgag 900
 aggccttgta aataccgaga ggccaatggc cttcccatca tggaaatcaa 950
 ctgctctcag cccagcaaga tccagctgcc agaggatgag tgaccagtgt 1000
 ctaagtgggg ctcaagaagc accgccttcc cccccccctg cctgccatcc 1050
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334

<211> 153

<212> PRT

<213> Homo sapiens

<400> 334

Met	Ala	Ala	Gly	Leu	Phe	Gly	Leu	Ser	Ala	Arg	Arg	Leu	Leu	Ala
1				5					10					15
Ala	Ala	Ala	Thr	Arg	Gly	Leu	Pro	Ala	Ala	Arg	Val	Arg	Trp	Glu
				20					25					30
Ser	Ser	Phe	Ser	Arg	Thr	Val	Val	Ala	Pro	Ser	Ala	Val	Ala	Gly
				35					40					45
Lys	Arg	Pro	Pro	Glu	Pro	Thr	Thr	Pro	Trp	Gln	Glu	Asp	Pro	Glu
				50					55					60
Pro	Glu	Asp	Glu	Asn	Leu	Tyr	Glu	Lys	Asn	Pro	Asp	Ser	His	Gly
				65					70					75
Tyr	Asp	Lys	Asp	Pro	Val	Leu	Asp	Val	Trp	Asn	Met	Arg	Leu	Val
				80					85					90
Phe	Phe	Phe	Gly	Val	Ser	Ile	Ile	Leu	Val	Leu	Gly	Ser	Thr	Phe
				95					100					105
Val	Ala	Tyr	Leu	Pro	Asp	Tyr	Arg	Met	Lys	Glu	Trp	Ser	Arg	Arg
				110					115					120
Glu	Ala	Glu	Arg	Leu	Val	Lys	Tyr	Arg	Glu	Ala	Asn	Gly	Leu	Pro
				125					130					135
Ile	Met	Glu	Ser	Asn	Cys	Phe	Asp	Pro	Ser	Lys	Ile	Gln	Leu	Pro
				140					145					150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggtggg ctgtttggtt tgagcgtcg cgtcttttg gcggcagcgg 50
cgacgcgagg gctcccgcc gcccggtcc gctgggaatc tagcttctcc 100
aggactgttg togcoccgtc cgtgtggcg ggaagcggc cccagaacc 150
gaccacaccg tggcaagagg acccagaacc cgaggacgaa aacttgatg 200
agaagaacc agactcccat ggttatgaca aggacccgt ttggacgtc 250
tggaacatgc gacttgtctt cttctttggc gtctccatca tctgggtct 300
tggcagcacc ttgtggcct atctgctga ctacaggatg aaagagtgg 350
ccgcgcgga agctgagagg ctgtgaaat accgagaggc caatggcctt 400
cccatcatgg aatccaactg ctctgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagcaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgttttt gagcccccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339
gcggcggcta tgccgcttgc tctgctcgtc ctgttgctcc tggggcccgg 50
cggtggtgct cttgcagaac cccacgcga cagcctgcgg gaggaacttg 100
tcatacccc gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggct 200
ctttccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250
tgcacctgtc attcacaaa ggcttttga ggaccgata ctgggggcca 300
cccttcctgc aggcacctc aggtgcagag ctgtgggtct ggttccaaga 350
cactgtcact gatgtggata aatcttgaa ggagctcagt aatgtcctct 400
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450
actcccaactg cctccttcaa acccctgggt ctggccaatg aactgacca 500
ctactttctg cgctatgctg tgcctgcgcg ggaggtggtc tgcaccgaaa 550
acctcaccac ctggaagaag ctcttgccct gtatgttcaa ggcaggcctc 600
tctgtgctgc tgaaggcaga tcgcttgctc cacaccagct accactccca 650
ggcagtgcat atccgccctg tttgcagaaa tgcacgctgt actagcatct 700
cctgggagct gaggcagacc ctgtcagttg tatttgatgc ctctcatcac 750
gggcagggaa agaaagactg gtccctcttc cggatgttct ccgaacctt 800
cacggagccc tgccccctg cttcagagag ccgagtctat gtggacatca 850
ccacctacaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900
actacatatc aggacgtcat cctaggcact cggaagacct atgccatcta 950
tgacttgctt gacaccgcca tgatcaacaa ctctcgaaac ctcaacatcc 1000
agctcaagtg gaagagaccc ccagagaatg agggccccc agtgcccttc 1050
ctgcatgccc agcggtagct gagtggctat gggctgcaga agggggagct 1100
gagcacactg ctgtacaaca cccaccata ccgggccttc ccggtgctgc 1150
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atcacctcca agggcaagga gaacaaacca agttacatcc actaccagcc 1250
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cgccaactc agtcaccaag gtttccatcc agtttgagcg ggcgtgctg 1350
aagtggaccg agtacacgcc agatcctaac catggttctt atgtcagccc 1400
atctgtcctc agcgccttg tgcccagcat ggtagcagcc aagccagtgg 1450
actgggaaga gagtccctc ttcaacagcc tgttccagct ctctgatggc 1500

tctaactact ttgtgcggct ctacacggag ccgctgctgg tgaacctgcc 1550
 gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcactg 1600
 tgggtggcgt gtgctacggc tcttcttaca atctcctcac ccgaaccttc 1650
 cacatcgagg agccccgcac aggtggcctg gccaaagcgg tgcccaacct 1700
 tatccggcgc gcccgagggtg tccccccact ctgattcttg ccctttccag 1750
 cagctgcagc tgccgtttct ctctggggag gggagcccaa gggtgtttc 1800
 tgccacttgc tctcctcaga gttggctttt gaaccaaagt gccctggacc 1850
 aggtcagggc ctacagctgt gttgtcagc acaggagcca cgagccaagt 1900
 gtggcatttg aatttgaatt aacttagaaa ttcatttct cactgtagt 1950
 ggccacctct atattgaggt gctcaataag caaaagtgt cggtggctgc 2000
 tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050
 ggcagcactg gccaaaggtga tgggggtgtc tacacagtgt atgtcactgt 2100
 gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150
 aaaaaaaaaa aa 2162

<210> 340

<211> 574

<212> PRT

<213> Homo sapiens

<400> 340

Met	Pro	Leu	Ala	Leu	Leu	Val	Leu	Leu	Leu	Gly	Pro	Gly	Gly	1	5	10	15
Trp	Cys	Leu	Ala	Glu	Pro	Pro	Arg	Asp	Ser	Leu	Arg	Glu	Glu	20	25	30	35
Val	Ile	Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	40	45	50	55
Phe	Arg	Thr	Arg	Trp	Asp	Ser	Glu	Leu	Gln	Arg	Glu	Gly	Val	60	65	70	75
His	Tyr	Arg	Leu	Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	80	85	90	95
Tyr	Ser	Leu	Arg	Glu	Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	100	105	110	115
Arg	Thr	Arg	Tyr	Trp	Gly	Pro	Pro	Phe	Leu	Gln	Ala	Pro	Ser	120	125	130	135
Ala	Glu	Leu	Trp	Val	Trp	Phe	Gln	Asp	Thr	Val	Thr	Asp	Val	140	145	150	155
Lys	Ser	Trp	Lys	Glu	Leu	Ser	Asn	Val	Leu	Ser	Gly	Ile	Phe	160	165	170	175
Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr	Asn	Thr	Val	Thr	Pro	180	185	190	195

Ala Ser Phe Lys	Pro Leu Gly Leu Ala	Asn Asp Thr Asp His Tyr	155	160	165
Phe Leu Arg Tyr	Ala Val Leu Pro Arg	Glu Val Val Cys Thr Glu	170	175	180
Asn Leu Thr Pro	Trp Lys Lys Leu Leu	Pro Cys Ser Ser Lys Ala	185	190	195
Gly Leu Ser Val	Leu Leu Lys Ala Asp	Arg Leu Phe His Thr Ser	200	205	210
Tyr His Ser Gln	Ala Val His Ile Arg	Pro Val Cys Arg Asn Ala	215	220	225
Arg Cys Thr Ser	Ile Ser Trp Glu Leu	Arg Gln Thr Leu Ser Val	230	235	240
Val Phe Asp Ala	Phe Ile Thr Gly Gln	Gly Lys Lys Asp Trp Ser	245	250	255
Leu Phe Arg Met	Phe Ser Arg Thr Leu	Thr Glu Pro Cys Pro Leu	260	265	270
Ala Ser Glu Ser	Arg Val Tyr Val Asp	Ile Thr Thr Tyr Asn Gln	275	280	285
Asp Asn Glu Thr	Leu Glu Val His Pro	Pro Pro Thr Thr Thr Tyr	290	295	300
Gln Asp Val Ile	Leu Gly Thr Arg Lys	Thr Tyr Ala Ile Tyr Asp	305	310	315
Leu Leu Asp Thr	Ala Met Ile Asn Asn	Ser Arg Asn Leu Asn Ile	320	325	330
Gln Leu Lys Trp	Lys Arg Pro Pro Glu	Asn Glu Ala Pro Pro Val	335	340	345
Pro Phe Leu His	Ala Gln Arg Tyr Val	Ser Gly Tyr Gly Leu Gln	350	355	360
Lys Gly Glu Leu	Ser Thr Leu Leu Tyr	Asn Thr His Pro Tyr Arg	365	370	375
Ala Phe Pro Val	Leu Leu Leu Asp Thr	Val Pro Trp Tyr Leu Arg	380	385	390
Leu Tyr Val His	Thr Leu Thr Ile Thr	Ser Lys Gly Lys Glu Asn	395	400	405
Lys Pro Ser Tyr	Ile His Tyr Gln Pro	Ala Gln Asp Arg Leu Gln	410	415	420
Pro His Leu Leu	Glu Met Leu Ile Gln	Leu Pro Ala Asn Ser Val	425	430	435
Thr Lys Val Ser	Ile Gln Phe Glu Arg	Ala Leu Leu Lys Trp Thr	440	445	450
Glu Tyr Thr Pro	Asp Pro Asn His Gly	Phe Tyr Val Ser Pro Ser	455	460	465

Val Leu Ser Ala	Leu Val Pro Ser Met	Val Ala Ala Lys Pro Val
470		480
Asp Trp Glu Glu Ser	Pro Leu Phe Asn Ser	Leu Phe Pro Val Ser
485		495
Asp Gly Ser Asn Tyr	Phe Val Arg Leu Tyr	Thr Glu Pro Leu Leu
500		510
Val Asn Leu Pro Thr	Pro Asp Phe Ser Met	Pro Tyr Asn Val Ile
515		525
Cys Leu Thr Cys Thr	Val Val Ala Val Cys	Tyr Gly Ser Phe Tyr
530		540
Asn Leu Leu Thr Arg	Thr Phe His Ile Glu	Glu Pro Arg Thr Gly
545		555
Gly Leu Ala Lys Arg	Leu Ala Asn Leu Ile	Arg Arg Ala Arg Gly
560		570

Val Pro Pro Leu

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggtat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

<400> 344
caacatgggg tccagcagct tcttggctct catggtgtct ctogttcttg 50
tgacctgggt ggctgtggaa ggagttaaag agggatataga gaaagcaggg 100
gtttgccagc ctgacaacgt acgctgcttc aagtccgac ctcgccagtg 150
tcacacagac caggactgtc tgggggaaag gaagtgttg tacctgcact 200
gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250
aaggatgaag atgtgtcaag gccataccct gagccaggat ggagggccaa 300
gtgtccaggc tctctctota ccaggtgttc tcagaaatga tgetgggtcc 350
tttctacctc tgggggtcac tctcacttgg cacctgcccc tgagggtcct 400
gagacttggga atattggaaga agcaataacc aacccccacca aagaaaacct 450
gagcttgaag tcttttccc caaaaaggagg gaagagtcac aaaaagtcca 500
gacccacagg acggtacttt cctctctac ctggtgctcc tccctaattgc 550
tcattgaatg acccctcatg aatgaaacca gtgcccttat aagagacccc 600
aaagagctgc cttgccttc tgcaatgtgt gatcacagct agaaggcact 650
gtcagagaag agaaactgg cctcaccaga tgctgaatct gctggtgcct 700
tgattcttga cttcccagcc tctagaactg taagaaataa atatttgcg 750
tttataatcc aa 762

<210> 345
<211> 111
<212> PRT
<213> Homo sapiens

<400> 345
Met Gly Ser Ser Ser Phe Leu Val Leu Met Val Ser Leu Val Leu
1 5 10 15
Val Thr Leu Val Ala Val Glu Gly Val Lys Glu Gly Ile Glu Lys
20 25 30
Ala Gly Val Cys Pro Ala Asp Asn Val Arg Cys Phe Lys Ser Asp
35 40 45
Pro Pro Gln Cys His Thr Asp Gln Asp Cys Leu Gly Glu Arg Lys
50 55 60
Cys Cys Tyr Leu His Cys Gly Phe Lys Cys Val Ile Pro Val Lys
65 70 75
Glu Leu Glu Glu Gly Gly Asn Lys Asp Glu Asp Val Ser Arg Pro
80 85 90
Tyr Pro Glu Pro Gly Trp Glu Ala Lys Cys Pro Gly Ser Ser Ser
95 100 105
Thr Arg Cys Pro Gln Lys
110

<210> 346
 <211> 2528
 <212> DNA
 <213> Homo sapiens

<400> 346
 aaactcagca cttgccggag tggctcattg ttaagacaaa ggggtgtgcac 50
 ttctctggcca ggaaacctga gcggtgagac toccagctgc ctacatcaag 100
 gccccagcac atgcagaacc ttctctctaga acccgaccca ccaccatgag 150
 gtctctgctg tggagatgca ggcacctgag ccaaggcgto cagtgtgctc 200
 tgcttctggc tgtctctggc ttctttctct togccttgcc ctcttttatt 250
 aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaacattaa 300
 agaaaagtct ctacagtccc tggcaaagcc taagtcccag gcaccacaaa 350
 gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
 ctcaacacac aaacccagcc caaggccacc accaccggag acagaggaaa 450
 ggaggccaac caggcaccgc cggaggagca ggacaaggtg cccacacag 500
 cacagagggc agcatggaag agcccagaaa aagagaaaac catgtgtgaac 550
 acactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600
 ggacacaatc tggaaagacc aggcacacaaa gacgacccaa ggaatgggg 650
 gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700
 ggcaaagcgg caaccacagc caagacgctc attccaaaaa gtcagcacag 750
 aatgctggct cccacaggag cagtgtcaac aaggacgaga cagaaaaggag 800
 tgaccacagc agtcatccca cctaaggaga agaaacctca ggccacccca 850
 ccccttgccc ctttccagag cccacgacg cagagaaaacc aaagactgaa 900
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 gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000
 aaagcctcca agtcgctgtg gctccagaaa ctctttctgc ccaacctcac 1050
 tctctctctg gactccagac acttcaacca gagtgtgtgg gaccgcctgg 1100
 aacactttgc accacccttt ggcttcattg agctcaacta ctcttgggtg 1150
 cagaaggtcg tgacacgctt ccctccagtg cccagcagc agctgtctct 1200
 ggccagccctc ccgctggga gcctccgggt catcacctgt gccgtgggtg 1250
 gcaacggggg catcctgaac aactcccaca tgggccagga gatagacagt 1300
 cagactacg tgttccgatt gagcggagct ctcatataag gctacgaaca 1350
 ggatgtgggg actcggacat ctttctacgg ctttaccgcc ttctccctga 1400
 cccagtoact ccttatattg ggcaatcggg gtttcaagaa cgtgcctctt 1450

gggaaggacg tccgctactt gcacttctctg gaaggcaccg gggactatga 1500
 gtggctggaa gcaactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550
 tctgtgttac gcacagaccc caggaagctt ttcgggaagc cctgcacatg 1600
 gagaggatcc tgttgcgtca ccagacttt ctccgataca tgaagaacag 1650
 gtttctgagg tctaagaccg tggatgggtc ccaactggagg atataccgcc 1700
 ccacactagg ggcctctctg ctgctcactg cccttcagct ctgtgaccag 1750
 gtgagtgtct atggcttcat cactgagggc catgagcgct tttctgatca 1800
 ctactatgat acatcatgga agcggctgat cttttacata aaccatgact 1850
 tcaagctgga gagagaagtc tggaagcgcc tacacgatga agggataatc 1900
 cggtgtgacc agcgtctctg tcccggaaact gccaaagcca agaactgacc 1950
 gggggccagg ctgccatggt ctcccttgct gctccaaggc acaggataca 2000
 gtgggaatct tgagactctt tggccatttc ccattggctca gactaagctc 2050
 caagcccttc aggagtcca agggaaacact tgaaccatgg acaagactct 2100
 ctcaagatgg caaatggcta attgaggttc tgaagttctt cagtacattg 2150
 ctgtaggctc tgaggccagg gatttttaat taaatggggt gatgggtggc 2200
 caatacacca attctctgtg aaaaacactc ttccagtcca aaagcttctt 2250
 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300
 attccagatc gagtttacag ttgtgaaatc ttgaaggtat tacttaactt 2350
 cactacagat tgtctagaag acctttctag gagttatctg attctagaag 2400
 ggtctatact tgtccttgct ttttaagctat ttgacaactc tacgtgtgtg 2450
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 attttctaca gtgaaaaaaaa aaaaaaaa 2528

<210> 347
 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 347
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 Gln Trp Ser Leu Leu Leu Ala Val Leu Val Phe Phe Leu Phe Ala
 20 25 30
 Leu Pro Ser Phe Ile Lys Glu Pro Gln Thr Lys Pro Ser Arg His
 35 40 45
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala
 50 55 60
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

	65	70	75
Tyr Ala Glu Pro	Ala Pro Glu Asn Asn	Ala Leu Asn Thr Gln Thr	
	80	85	90
Gln Pro Lys Ala His Thr Thr Gly Asp	Arg Gly Lys Glu Ala Asn		
	95	100	105
Gln Ala Pro Pro Glu Glu Gln Asp Lys	Val Pro His Thr Ala Gln		
	110	115	120
Arg Ala Ala Trp Lys Ser Pro Glu Lys	Glu Lys Thr Met Val Asn		
	125	130	135
Thr Leu Ser Pro Arg Gly Gln Asp Ala	Gly Met Ala Ser Gly Arg		
	140	145	150
Thr Glu Ala Gln Ser Trp Lys Ser Gln Asp	Thr Lys Thr Thr Gln		
	155	160	165
Gly Asn Gly Gly Gln Thr Arg Lys Leu Thr	Ala Ser Arg Thr Val		
	170	175	180
Ser Glu Lys His Gln Gly Lys Ala Ala Thr	Thr Thr Ala Lys Thr Leu		
	185	190	195
Ile Pro Lys Ser Gln His Arg Met Leu Ala	Pro Thr Gly Ala Val		
	200	205	210
Ser Thr Arg Thr Arg Gln Lys Gly Val Thr	Thr Thr Ala Val Ile Pro		
	215	220	225
Pro Lys Glu Lys Lys Pro Gln Ala Thr	Pro Pro Pro Ala Pro Phe		
	230	235	240
Gln Ser Pro Thr Thr Gln Arg Asn Gln Arg	Leu Lys Ala Ala Asn		
	245	250	255
Phe Lys Ser Glu Pro Arg Trp Asp Phe Glu	Glu Lys Tyr Ser Phe		
	260	265	270
Glu Ile Gly Gly Leu Gln Thr Thr Cys Pro	Asp Ser Val Lys Ile		
	275	280	285
Lys Ala Ser Lys Ser Leu Trp Leu Gln Lys	Leu Phe Leu Pro Asn		
	290	295	300
Leu Thr Leu Phe Leu Asp Ser Arg His Phe	Asn Gln Ser Glu Trp		
	305	310	315
Asp Arg Leu Glu His Phe Ala Pro Pro Phe	Gly Phe Met Glu Leu		
	320	325	330
Asn Tyr Ser Leu Val Gln Lys Val Val Thr	Arg Phe Pro Pro Val		
	335	340	345
Pro Gln Gln Gln Leu Leu Leu Ala Ser Leu	Pro Ala Gly Ser Leu		
	350	355	360
Arg Cys Ile Thr Cys Ala Val Val Gly Asn	Gly Gly Ile Leu Asn		
	365	370	375
Asn Ser His Met Gly Gln Glu Ile Asp Ser His Asp Tyr Val Phe			

380	385	390
Arg Leu Ser Gly Ala Leu Ile Lys Gly Tyr Glu Gln Asp Val Gly		
395	400	405
Thr Arg Thr Ser Phe Tyr Gly Phe Thr Ala Phe Ser Leu Thr Gln		
410	415	420
Ser Leu Leu Ile Leu Gly Asn Arg Gly Phe Lys Asn Val Pro Leu		
425	430	435
Gly Lys Asp Val Arg Tyr Leu His Phe Leu Glu Gly Thr Arg Asp		
440	445	450
Tyr Glu Trp Leu Glu Ala Leu Leu Met Asn Gln Thr Val Met Ser		
455	460	465
Lys Asn Leu Phe Trp Phe Arg His Arg Pro Gln Glu Ala Phe Arg		
470	475	480
Glu Ala Leu His Met Asp Arg Tyr Leu Leu Leu His Pro Asp Phe		
485	490	495
Leu Arg Tyr Met Lys Asn Arg Phe Leu Arg Ser Lys Thr Leu Asp		
500	505	510
Gly Ala His Trp Arg Ile Tyr Arg Pro Thr Thr Gly Ala Leu Leu		
515	520	525
Leu Leu Thr Ala Leu Gln Leu Cys Asp Gln Val Ser Ala Tyr Gly		
530	535	540
Phe Ile Thr Glu Gly His Glu Arg Phe Ser Asp His Tyr Tyr Asp		
545	550	555
Thr Ser Trp Lys Arg Leu Ile Phe Tyr Ile Asn His Asp Phe Lys		
560	565	570
Leu Glu Arg Glu Val Trp Lys Arg Leu His Asp Glu Gly Ile Ile		
575	580	585
Arg Leu Tyr Gln Arg Pro Gly Pro Gly Thr Ala Lys Ala Lys Asn		
590	595	600

<210> 348

<211> 496

<212> DNA

<213> Homo sapiens

<400> 348

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 gaaggacaag tttctaaaac accttacagg ccctctttat ttagtccaa 150
 agtgcagcaa acacttccat agactttatc acaaacaccag agactgcacc 200
 attcctgcat actataaaag atgcgcgcagg cttcttaccg ggctggctgt 250
 cagtccagtg tgcattggagg ataagtgcgc agaccgtaca ggagcagcac 300
 accaggagcc atgagaagtg ccttggaaac caacagggaa acagaactat 350

ctttatacac atccccctcat ggacaagaga tttatTTTTg cagacagact 400
 cttccataag tcctttgagt tttgtatgtt gttgacagtt tgcagatata 450
 tattcgataa atcagtgtag ttgacagtggt tatctgtcac ttattt 496

<210> 349
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
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 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp
 20 25 30
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu
 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90

Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 350
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 gcggggctcc gccgggcccgc gccgctcacc gcaatcgctc tgttggtgct 150
 ggggggctccc ctggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200
 ggaatggctc ctggcatccg ggggttaact gcgagttctt cacctctgct 250
 tgcgggacct gctaccatcg gtactgctgc agggacctga ccttgcttat 300
 caccgagagg cagcagaagc actgcctggc ctcagcccc aagaccatag 350
 caggcatcgc ctacgctgtg atcctctttg ttgctgtggt tgcaccacc 400
 atctgtgctt tctctgttc ctgttgctac ctgtaccgcc ggcgccagca 450
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actctaccca gctgggcccc cagtctacaa cctgcagct cctcctccct 650
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<210> 351
 <211> 197
 <212> PRT
 <213> Homo sapiens

<400> 351
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 20 25
 Cys Leu Trp Tyr Leu Asp Arg Asn Gly Ser Trp His Pro Gly Phe 45
 35 40
 Asn Cys Glu Phe Phe Thr Phe Cys Cys Gly Thr Cys Tyr His Arg 60
 50 55
 Tyr Cys Cys Arg Asp Leu Thr Leu Leu Ile Thr Glu Arg Gln Gln 75
 65 70
 Lys His Cys Leu Ala Phe Ser Pro Lys Thr Ile Ala Gly Ile Ala 90
 80 85
 Ser Ala Val Ile Leu Phe Val Ala Val Val Ala Thr Thr Ile Cys 105
 95 100
 Cys Phe Leu Cys Ser Cys Cys Tyr Leu Tyr Arg Arg Arg Gln Gln 120
 110 115
 Leu Gln Ser Pro Phe Glu Gly Gln Glu Ile Pro Met Thr Gly Ile 135
 125 130
 Pro Val Gln Pro Val Tyr Pro Tyr Pro Gln Asp Pro Lys Ala Gly 150
 140 145
 Pro Ala Pro Pro Gln Pro Gly Phe Met Tyr Pro Pro Ser Gly Pro 165
 155 160
 Ala Pro Gln Tyr Pro Leu Tyr Pro Ala Gly Pro Pro Val Tyr Asn 180
 170 175

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
185 190 195

Gly Ala

<210> 352
<211> 3226
<212> DNA
<213> Homo sapiens

<400> 352
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tctcttaact gtgtccactc ctctcatggtg tcagagcact gaagcatctc 200
caaaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttcct 250
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tggcctttcc ctgctttgat gaacctgcct tcaaagcaag tttctcaatc 700
aaaattagaa gagagccaag gcacctagcc atctccaata tgccattggt 750
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tctgtcagca agataaccaa gagtggagtc aagggttctg tttatgtgtg 900
gccagacaag ataaatcaag cagattatgc actggatgct gcggtgactc 950
ttctagaatt ttataggat tatttcagca taccgtatcc cctacccaaa 1000
caagatcttg ctgctattcc cgactttcag tctggtgcta tggaaaactg 1050
gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100
cttctgcac aagtaagctt ggcacacag tgactgtggc ccatgaactg 1150
gccaccagat ggtttgggaa cctggctact atggaatggt ggaatgatct 1200
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 ccttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000
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 aaaaaaaaa aaaaaaaaa aaaaaa 3226

<210> 353
 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
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 Leu Leu Ser Ser Leu Leu Ala Leu Leu Thr Val Ser Thr Pro Ser
 20 25 30
 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr
 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

Thr Val Ala Glu Gly Leu Ile Glu Asp His Phe Asp Val Thr Val	215	220	225
	230	235	240
Lys Met Ser Thr Tyr Leu Val Ala Phe Ile Ile Ser Asp Phe Glu			
	245	250	255
Ser Val Ser Lys Ile Thr Lys Ser Gly Val Lys Val Ser Val Tyr			
	260	265	270
Ala Val Pro Asp Lys Ile Asn Gln Ala Asp Tyr Ala Leu Asp Ala			
	275	280	285
Ala Val Thr Leu Leu Glu Phe Tyr Glu Asp Tyr Phe Ser Ile Pro			
	290	295	300
Tyr Pro Leu Pro Lys Gln Asp Leu Ala Ala Ile Pro Asp Phe Gln			
	305	310	315
Ser Gly Ala Met Glu Asn Trp Gly Leu Thr Thr Tyr Arg Glu Ser			
	320	325	330
Ala Leu Leu Phe Asp Ala Glu Lys Ser Ser Ala Ser Ser Lys Leu			
	335	340	345
Gly Ile Thr Val Thr Val Ala His Glu Leu Ala His Gln Trp Phe			
	350	355	360
Gly Asn Leu Val Thr Met Glu Trp Trp Asn Asp Leu Trp Leu Asn			
	365	370	375
Glu Gly Phe Ala Lys Phe Met Glu Phe Val Ser Val Ser Val Thr			
	380	385	390
His Pro Glu Leu Lys Val Gly Asp Tyr Phe Phe Gly Lys Cys Phe			
	395	400	405
Asp Ala Met Glu Val Asp Ala Leu Asn Ser Ser His Pro Val Ser			
	410	415	420
Thr Pro Val Glu Asn Pro Ala Gln Ile Arg Glu Met Phe Asp Asp			
	425	430	435
Val Ser Tyr Asp Lys Gly Ala Cys Ile Leu Asn Met Leu Arg Glu			
	440	445	450
Tyr Leu Ser Ala Asp Ala Phe Lys Ser Gly Ile Val Gln Tyr Leu			
	455	460	465
Gln Lys His Ser Tyr Lys Asn Thr Lys Asn Glu Asp Leu Trp Asp			
	470	475	480
Ser Met Ala Ser Ile Cys Pro Thr Asp Gly Val Lys Gly Met Asp			
	485	490	495
Gly Phe Cys Ser Arg Ser Gln His Ser Ser Ser Ser His Trp			
	500	505	510
His Gln Glu Gly Val Asp Val Lys Thr Met Met Asn Thr Trp Thr			
	515	520	525
Leu Gln Arg Gly Phe Pro Leu Ile Thr Ile Thr Val Arg Gly Arg			

Asn Val His Met	Lys Gln Glu His Tyr	Met Lys Gly Ser Asp	Gly
545	550	555	
Ala Pro Asp Thr	Gly Tyr Leu Trp His	Val Pro Leu Thr Phe	Ile
560	565	570	
Thr Ser Lys Ser	Asn Met Val His Arg	Phe Leu Leu Lys Thr	Lys
575	580	585	
Thr Asp Val Leu	Ile Leu Pro Glu Glu	Val Glu Trp Ile Lys	Phe
590	595	600	
Asn Val Gly Met	Asn Gly Tyr Tyr Ile	Val His Tyr Glu Asp	Asp
605	610	615	
Gly Trp Asp Ser	Leu Thr Gly Leu Leu	Lys Gly Thr His Thr	Ala
620	625	630	
Val Ser Ser Asn	Asp Arg Ala Ser Leu	Ile Asn Asn Ala Phe	Gln
635	640	645	
Leu Val Ser Ile	Gly Lys Leu Ser Ile	Glu Lys Ala Leu Asp	Leu
650	655	660	
Ser Leu Tyr Leu	Lys His Glu Thr Glu	Ile Met Pro Val Phe	Gln
665	670	675	
Gly Leu Asn Glu	Leu Ile Pro Met Tyr	Lys Leu Met Glu Lys	Arg
680	685	690	
Asp Met Asn Glu	Val Glu Thr Gln Phe	Lys Ala Phe Leu Ile	Arg
695	700	705	
Leu Leu Arg Asp	Leu Ile Asp Lys Gln	Thr Trp Thr Asp Glu	Gly
710	715	720	
Ser Val Ser Glu	Gln Met Leu Arg Ser	Glu Leu Leu Leu Leu	Ala
725	730	735	
Cys Val His Asn	Tyr Gln Pro Cys Val	Gln Arg Ala Glu Gly	Tyr
740	745	750	
Phe Arg Lys Trp	Lys Glu Ser Asn Gly	Asn Leu Ser Leu Pro	Val
755	760	765	
Asp Val Thr Leu	Ala Val Phe Ala Val	Gly Ala Gln Ser Thr	Glu
770	775	780	
Gly Trp Asp Phe	Leu Tyr Ser Lys Tyr	Gln Phe Ser Leu Ser	Ser
785	790	795	
Thr Glu Lys Ser	Gln Ile Glu Phe Ala	Leu Cys Arg Thr Gln	Asn
800	805	810	
Lys Glu Lys Leu	Gln Trp Leu Leu Asp	Glu Ser Phe Lys Gly	Asp
815	820	825	
Lys Ile Lys Thr	Gln Glu Phe Pro Gln	Ile Leu Thr Leu Ile	Gly
830	835	840	
Arg Asn Pro Val	Gly Tyr Pro Leu Ala	Trp Gln Phe Leu Arg	Lys

845	850	855
Asn Trp Asn Lys Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser Ser	
860	865	870
Ile Ala His Met Val Met Gly Thr Thr	Asn Gln Phe Ser Thr Arg	
875	880	885
Thr Arg Leu Glu Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys Glu	
890	895	900
Asn Gly Ser Gln Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr Ile	
905	910	915
Glu Glu Asn Ile Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile Arg	
920	925	930
Val Trp Leu Gln Ser Glu Lys Leu Glu Arg	Met	
935	940	

<210> 354
 <211> 1587
 <212> DNA
 <213> Homo sapiens

<400> 354
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 gaacaccagc tgcgacagcg gcttgggggt ccaggacacg ttgatgctca 200
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 gccaaaggacc aggagcccg cgtcactgag caccggatgg gccccggcct 300
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 ggagacgctg ctgctcatag atgtaggact cacatcaacc ctgtgggga 800
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 cagggggccc actcattgtt atgatgggta cattcatctc tcaggagggtg 1100
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 gcgtgatgtg cagcctcctg cctctcagca tgaggagggt ggggctgagg 1250
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 ttcacgctg ctgaccaccc aactcaacc tccctctgac ctcataacct 1400
 aatggccttg gacaccagat tctttccat tctgtccatg aatcatcttc 1450
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500
 gcctggagca tccggacttg cctatggga gaggggagcg tggaggagtg 1550
 gctgcagtga ttgtataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro	1	5	10	15
Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln	20	25	30	35
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys	35	40	45	50
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met	50	55	60	65
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly	65	70	75	80
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg	80	85	90	95
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg	95	100	105	110
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp	110	115	120	125
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val	125	130	135	140
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile	140	145	150	155
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu	155	160	165	170

155	160	165
Arg Gly Gly Gly Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys Met	
170	175	180
Pro Gln Pro Gly Cys Asn Leu Leu Asn	Gly Thr Gln Glu Ile Gly	
185	190	195
Pro Val Gly Met Thr Glu Asn Cys Asn	Arg Lys Asp Phe Leu Thr	
200	205	210
Cys His Arg Gly Thr Thr Ile Met Thr	His Gly Asn Leu Ala Gln	
215	220	225
Glu Pro Thr Asp Trp Thr Thr Ser Asn	Thr Glu Met Cys Glu Val	
230	235	240
Gly Gln Val Cys Gln Glu Thr Leu Leu	Leu Ile Asp Val Gly Leu	
245	250	255
Thr Ser Thr Leu Val Gly Thr Lys Gly	Cys Ser Thr Val Gly Ala	
260	265	270
Gln Asn Ser Gln Lys Thr Thr Ile His	Ser Ala Pro Pro Gly Val	
275	280	285
Leu Val Ala Ser Tyr Thr His Phe Cys	Ser Ser Asp Leu Cys Asn	
290	295	300
Ser Ala Ser Ser Ser Ser Val Leu Leu	Asn Ser Leu Pro Pro Gln	
305	310	315
Ala Ala Pro Val Pro Gly Asp Arg Gln	Cys Pro Thr Cys Val Gln	
320	325	330
Pro Leu Gly Thr Cys Ser Ser Gly Ser	Pro Arg Met Thr Cys Pro	
335	340	345
Arg Gly Ala Thr His Cys Tyr Asp Gly	Tyr Ile His Leu Ser Gly	
350	355	360
Gly Gly Leu Ser Thr Lys Met Ser Ile	Gln Gly Cys Val Ala Gln	
365	370	375
Pro Ser Ser Phe Leu Leu Asn His Thr	Arg Gln Ile Gly Ile Phe	
380	385	390
Ser Ala Arg Glu Lys Arg Asp Val Gln	Pro Pro Ala Ser Gln His	
395	400	405
Glu Gly Gly Gly Ala Glu Gly Leu Glu	Ser Leu Thr Trp Gly Val	
410	415	420
Gly Leu Ala Leu Ala Pro Ala Leu Trp	Trp Gly Val Val Cys Pro	
425	430	435
Ser Cys		

<210> 356
 <211> 1238
 <212> DNA
 <213> Homo sapiens

<400> 356
 ggcacgggca ggacgccccg ttgcctagc gcgtgctcag gagttggtgt 50
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 tcagcctggc cttcctgtca ctgctgccat ctggacatcc tcagccggct 150
 ggcgatgacg cctgctctgt gcagatcctc gtccttgccc tcaaagggga 200
 tgcgggagag aaggagagaca aaggcgcgcc cgagcggcct ggaagagtgc 250
 gccccacggg agaaaaagga gacatggggg acaagagaca gaaaggcagt 300
 gtgggtcgct atggaaaaat tggctccatt ggctctaaag gtgagaaagg 350
 agattccggt gacataggac cccctggtcc taatggagaa ccaggcctcc 400
 catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450
 gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtgcccg 500
 tgtgcgcgag acggagagca agatctacct gctggtgaag gaggagaagc 550
 gctacgcgga cggccagctg tcttgccagg gccgcggggg cacgctgagc 600
 atgcccaggc acgagggtgc caatggcctg atggccgat acctggcgca 650
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 gcgcctctgt gtactctgac cactccccc tgcggacctt caacaagtgg 750
 cgcagcggtg agcccaaca tgcctacgac gaggagact gcgtggagat 800
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 tcattgtgta gtttgacaag gagaacatgt gagcctcagg ctggggctgc 900
 ccattggggg cccacatgt cctgcaggg ttggcaggga cagagcccag 950
 accatggtgc cagccaggga gctgtccctc tgtgaagggt ggaggctcac 1000
 tgagtagagg gctgttgtct aaactgagaa aatggcctat gcttaaggag 1050
 aaaatgaaag tgttcctggg gtgctgtctc tgaagaagca gagttcatt 1100
 acctgtattg tagcccaaat gtcattatgt aattattacc cagaattgct 1150
 cttccataaa gcttgtgcct ttgtccaagc tatacaataa aatctttaag 1200
 tagtgagta gttaagtcca aaaaaaaaa aaaaaaaaa 1238

<210> 357
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 357
 Met Arg Gly Asn Leu Ala Leu Val Gly Val Leu Ile Ser Leu Ala
 1 5 10 15
 Phe Leu Ser Leu Leu Pro Ser Gly His Pro Gln Pro Ala Gly Asp
 20 25 30

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp		35	40	45
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg		50	55	60
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln		65	70	75
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser		80	85	90
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro		95	100	105
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys		110	115	120
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu		125	130	135
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu		140	145	150
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp		155	160	165
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro		170	175	180
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln		185	190	195
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys		200	205	210
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe		215	220	225
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu		230	235	240
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala		245	250	255
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn		260	265	270

Met

<210> 358

<211> 972

<212> DNA

<213> Homo sapiens

<400> 358

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gagcaccggc agcaccagtg tgtgaggggg gcaggcagcg gtcctagcca 100

gttccttgat cctgccagac caccagcccc ccggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
 tagctcagag ctttggggct gctgtgaag agccacagga ggaggtggtt 250
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgtctca 300
 gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350
 gccaggctag cacagatcct aaggaatcaa catctccga gaaacgtgac 400
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450
 gggaaagaca ggacctttct taccttcagt gaggttcct cggcccttc 500
 atcccaatca gcttgatcc acaggaaagt cttccctggg aacagaggag 550
 cagagacctt tataagactc tcctacggat gtgaatcaag agaacgtccc 600
 cagctttggc atctcaagt atcccccgag agcagaatag gtactccact 650
 tccggactcc tggactgcat taggaagacc tcttccctg tcccaatccc 700
 caggtgcgca cgctcctgtt accctttctc ttcctgttc ttgtaacatt 750
 cttgtgcttt gactccttct ccatcttttc tacctgaccc tgggtgaggaa 800
 actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaatacc 850
 ctgagattcc tgtagtgtcc tacattaaaa atataatgtc tctctctatt 900
 cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359

<211> 135

<212> PRT

<213> Homo sapiens

<400> 359

Met	Arg	Ile	Met	Leu	Leu	Phe	Thr	Ala	Ile	Leu	Ala	Phe	Ser	Leu
1				5					10					15
Ala	Gln	Ser	Phe	Gly	Ala	Val	Cys	Lys	Glu	Pro	Gln	Glu	Glu	Val
				20					25					30
Val	Pro	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Pro	Asp	Leu	Tyr	Gln	
				35				40					45	
Leu	Leu	Gln	Arg	Leu	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu
				50				55					60	
Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr
				65				70					75	
Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met
				80				85					90	
Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu
				95				100					105	
Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly
				110				115					120	

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360
<211> 1738
<212> DNA
<213> Homo sapiens

<400> 360
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gcctgctgtg ccgcgctgt cgcgctgct acccgctgtg ctggagcgg 100
gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcggcc 150
agctctgccc caggagccca ggctgccccg tgagtcocat agttgctgca 200
ggagtggagc catgagctgc gtccctgggtg gtgtcatccc cttggggctg 250
ctgttccctg tetgaggatc ccaaggctac ctccctgccc acgtcactct 300
cttagaggag ctgctcagca aataccagca caacgagctc cactcccggt 350
tcccgagagc catccccagg gaggacaagg aggagatcct catgtgcac 400
aacaagcttc ggggccagggt gcagcctcag gcctccaaca tggagtacat 450
ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggccttg 500
gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
tgtgatggct ggctcagggt ctccctctggc agggggaggat cccggtctgt 600
ttctgttttg ttgtttgtt ttgagacagg gtctcactct gccactgacg 650
ctggagtgca atggcacaat cgtcatgccc tgaaacctta gactcccggt 700
gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750
accatgtgtc ccagctagat tttaaatatt ttgtggagat gggggctctg 800
ctacgttgcc caggctggtc ttgaactcct aggtcctaac aatcctcctg 850
cctcagcctc tcaaagtgtc aggattatag gcatgagtca cctgtctgtg 900
ctctggctct gttcttaaca ttctgcaaaa acaacacacg tgggttccct 950
gtgcagagcc tgctcgttg ccttcatgtc actcttggtg gctccactgg 1000
gaacacagct ctacgcttt cccacctgga ggcagagtgg ggagggggcc 1050
agggtggggc ttgtctgatg ctgatctcag ctgtgcacac cgctagctgc 1100
accacccctg cttctcctta gcccggtgta gctcacttt coacttgtag 1150
agtccctcct cgcgtggttg ccatgactgt gagataagtc gaggctgtga 1200
agggcccgcc acagactgac ctgctcccc aacccctagg ctttgctaac 1250
cgggaaagga gctaacgggtg acagaagaca gccaaagtca accctcccg 1300
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 agaggaatgg accacagtct tcagggtcc ctcctcgctt accaaccggg 1450
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 cacgtcccag cctgggtaac atggtaaagc cccgtctcta caaaaaatc 1550
 caagttagcc gggcatgggt gtgcgcacct gtagtcccag ctgcagtggg 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtcgagg ctgcagtggg ctgagattgc accatgac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361

<211> 159

<212> PRT

<213> Homo sapiens

<400> 361

Met	Ser	Cys	Val	Leu	Gly	Gly	Val	Ile	Pro	Leu	Gly	Leu	Leu	Phe
1				5					10					15
Leu	Val	Cys	Gly	Ser	Gln	Gly	Tyr	Leu	Leu	Pro	Asn	Val	Thr	Leu
				20					25					30
Leu	Glu	Glu	Leu	Leu	Ser	Lys	Tyr	Gln	His	Asn	Glu	Ser	His	Ser
				35					40					45
Arg	Val	Arg	Arg	Ala	Ile	Pro	Arg	Glu	Asp	Lys	Glu	Glu	Ile	Leu
				50					55					60
Met	Leu	His	Asn	Lys	Leu	Arg	Gly	Gln	Val	Gln	Pro	Gln	Ala	Ser
				65					70					75
Asn	Met	Glu	Tyr	Met	Val	Ser	Ala	Gly	Ser	Gly	Arg	Arg	Gly	Trp
				80					85					90
His	Arg	Gly	Trp	Gly	Leu	Gly	His	Gln	Pro	Ala	Leu	Phe	Pro	Ser
				95					100					105
Gln	Leu	Cys	Ser	Pro	Ala	Ser	Ala	Cys	Asp	Gly	Trp	Leu	Arg	Val
				110					115					120
Ser	Ser	Gly	Arg	Gly	Gly	Ser	Arg	Leu	Cys	Ser	Val	Leu	Phe	Val
				125					130					135
Cys	Phe	Glu	Thr	Gly	Ser	His	Ser	Ala	Thr	Asp	Ala	Gly	Val	Gln
				140					145					150
Trp	His	Asn	Arg	His	Ala	Leu	Lys	Pro						
				155										

<210> 362

<211> 422

<212> DNA

<213> Homo sapiens

<400> 362

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ggccactatg gggctcgggc tgccccttgt cctcctcttg accctccttg 100
 gcagctcaca tggaacaggc ccgggtatga ctttgcaact gaagctgaag 150
 gagtcctttc tgacaaattc ctccatagag tccagcttcc tgggaattgct 200
 tgaaaagctc tgcctcctcc tccatctccc ttcagggacc agcgtcacc 250
 tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300
 ttgaagcctg tgctcttctt gcccgggctc tttgggcccgg ggatgcagga 350
 ggcaggcccc gacctgtctc ttcagcaggc cccaccctc ctgagtggca 400
 ataaataaaa ttcggtatgc tg 422

<210> 363
 <211> 78
 <212> PRT
 <213> Homo sapiens

<400> 363
 Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
 1 5 10 15
 Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
 20 25 30
 Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
 35 40 45
 Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
 50 55 60
 Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
 65 70 75
 Cys Asn Thr

<210> 364
 <211> 826
 <212> DNA
 <213> Homo sapiens

<400> 364
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 acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150
 ttctgatgtg gggttcctcc actgtgttct gtgtgtctatt aatatttacc 200
 attgcagaag cttcattcag tgttgaaaaat gaatgcttag tggatctgtg 250
 cctcttaacg atatgttaca aattatctgg agttcctaata caatgcagag 300
 ttccccctcc ctccgattgt tctaaataat tgaaagatgt ctgctgtgga 350
 aaaagcgatg tatttaaatc tgtatgatgc tcaaccatct ttagttggga 400
 aaggctcctg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

caagtgagtg ttaccttttc acttagtagg atgtgttggt acgctagtaa 500
 aatagaaaac tgtgtttatt ctacaggtatt ttagaacaa cagccatcat 550
 tttattttat gtgtgtgttc ttggctgtat tcataaatta tatatttttg 600
 gctatcaaat attacttcat tcaatataaa taacaatagt agaagttggt 650
 tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700
 ttgttgtaat agcctttgaa atttacagta ctgtctctct actatcttca 750
 gattacttga ttcaaataaa ccaattatgt ttgtaattga tattaataaa 800
 accagaataa aagttcatat ctaccc 826

<210> 365

<211> 67

<212> PRT

<213> Homo sapiens

<400> 365

Met	Ile	Gly	Tyr	Tyr	Leu	Ile	Leu	Phe	Leu	Met	Trp	Gly	Ser	Ser
1				5					10				15	
Thr	Val	Phe	Cys	Val	Leu	Leu	Ile	Phe	Thr	Ile	Ala	Glu	Ala	Ser
				20				25					30	
Phe	Ser	Val	Glu	Asn	Glu	Cys	Leu	Val	Asp	Leu	Cys	Leu	Leu	Arg
				35				40					45	
Ile	Cys	Tyr	Lys	Leu	Ser	Gly	Val	Pro	Asn	Gln	Cys	Arg	Val	Pro
				50				55					60	
Leu	Pro	Ser	Asp	Cys	Ser	Lys								
				65										

<210> 366

<211> 2475

<212> DNA

<213> Homo sapiens

<400> 366

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 tgagacatcc ttgagaagag ccacagcata agagactgcc ctgcttggtg 100
 ttttgcagga tgatggtggc ccttcgagga gcttctgcat tgctggttct 150
 gttccttgca gcttttctgc cccgcgcgca gtgtaccag gaccagcca 200
 tgggtgcatta catctaccag cgctttcgag tcttgagca agggctggaa 250
 aaatgtacc aagcaacgag ggcatacatt caagaattcc aagagttctc 300
 aaaaaata tctgtcatgc tgggaagatg tcagacctac acaagtga 350
 acaagatgct agtgggtaac ttggcactga gagttgaac tgcccaacgg 400
 gagattgact acatacaata ccttcgagag gctgacgagt gcatcgatc 450
 agaggacaag aactggcag aatgttgct ccaagaagct gaagaagaga 500

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatgggc 550
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 ccagaacaaa cactgttttg gaatttgcaa acatacgggc attcatggag 700
 gataacacca agccagctcc ccggaagcaa atcctaacac tttcctggca 750
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 caacttctaa tgagataatc aaatataacc tgcagaagag gactgtggaa 850
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 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050
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 accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250
 atgcctggaa tgaaggaac cagatcattt acaaactcca gacaagaga 1300
 aagctgcctc tgaagtaatg cattacagct gtgagaaaga gcactgtggc 1350
 tttggcagct gttctacagg acagttaggc tatagcccct tcacaatata 1400
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 tgcctccttt cccaaatgtc actgccttag gtatcttcca agagcttaga 1500
 tgagagcata tcatacaggaa agtttcaaca atgtccatta ctcccccata 1550
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 ccacaattag agttgtatgc cagcccctaa tattoaccac tggcttttct 1700
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 tgggattaca ggcattgtgc accacacctg gcttaaaaa ctatttctta 1950
 ttgaggttta acctctattt cccctagccc tgtcctcca ctaagcttgg 2000
 tagatgtaat aataaagtga aaatattaac atttgaatat cgctttccag 2050
 gtgtggagtg tttgcacatc attgaattct cgtttcacct ttgtgaacaa 2100

tgcacaagtc ttacagctg tcattctaga gtttaggtga gtaacacaat 2150
 tacaagaatga aagatacagc tagaaaaatac tacaatatccc atagtttttc 2200
 cattgcccaca ggaagcatca aatacgtatg tttgttcacc tactcttata 2250
 gtcaatgcgt tcactggttc agcctaaaaa taatagtctg tcccttttagc 2300
 cagtttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350
 tcctccagaa aaccagtcta aggggtgagga ccccaactct agcctcctct 2400
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<210> 367

<211> 402

<212> PRT

<213> Homo sapiens

<400> 367

Met	Met	Val	Ala	Leu	Arg	Gly	Ala	Ser	Ala	Leu	Leu	Val	Leu	Phe	1	5	10	15
Leu	Ala	Ala	Phe	Leu	Pro	Pro	Pro	Gln	Cys	Thr	Gln	Asp	Pro	Ala	20	25	30	
Met	Val	His	Tyr	Ile	Tyr	Gln	Arg	Phe	Arg	Val	Leu	Glu	Gln	Gly	35	40	45	
Leu	Glu	Lys	Cys	Thr	Gln	Ala	Thr	Arg	Ala	Tyr	Ile	Gln	Glu	Phe	50	55	60	
Gln	Glu	Phe	Ser	Lys	Asn	Ile	Ser	Val	Met	Leu	Gly	Arg	Cys	Gln	65	70	75	
Thr	Tyr	Thr	Ser	Glu	Tyr	Lys	Ser	Ala	Val	Gly	Asn	Leu	Ala	Leu	80	85	90	
Arg	Val	Glu	Arg	Ala	Gln	Arg	Glu	Ile	Asp	Tyr	Ile	Gln	Tyr	Leu	95	100	105	
Arg	Glu	Ala	Asp	Glu	Cys	Ile	Val	Ser	Glu	Asp	Lys	Thr	Leu	Ala	110	115	120	
Glu	Met	Leu	Leu	Gln	Glu	Ala	Glu	Glu	Lys	Lys	Ile	Arg	Thr		125	130	135	
Leu	Leu	Asn	Ala	Ser	Cys	Asp	Asn	Met	Leu	Met	Gly	Ile	Lys	Ser	140	145	150	
Leu	Lys	Ile	Val	Lys	Lys	Met	Met	Asp	Thr	His	Gly	Ser	Trp	Met	155	160	165	
Lys	Asp	Ala	Val	Tyr	Asn	Ser	Pro	Lys	Val	Tyr	Leu	Leu	Ile	Gly	170	175	180	
Ser	Arg	Asn	Asn	Thr	Val	Trp	Glu	Phe	Ala	Asn	Ile	Arg	Ala	Phe	185	190	195	
Met	Glu	Asp	Asn	Thr	Lys	Pro	Ala	Pro	Arg	Lys	Gln	Ile	Leu	Thr	200	205	210	

Leu Ser Trp Gln Gly Thr Gly Gln Val Ile Tyr Lys Gly Phe Leu
 215 225
 Phe Phe His Asn Gln Ala Thr Ser Asn Glu Ile Ile Lys Tyr Asn
 230 235 240
 Leu Gln Lys Arg Thr Val Glu Asp Arg Met Leu Leu Pro Gly Gly
 245 250 255
 Val Gly Arg Ala Leu Val Tyr Gln His Ser Pro Ser Thr Tyr Ile
 260 265 270
 Asp Leu Ala Val Asp Glu His Gly Leu Trp Ala Ile His Ser Gly
 275 280 285
 Pro Gly Thr His Ser His Leu Val Leu Thr Lys Ile Glu Pro Gly
 290 295 300
 Thr Leu Gly Val Glu His Ser Trp Asp Thr Pro Cys Arg Ser Gln
 305 310 315
 Asp Ala Glu Ala Ser Phe Leu Leu Cys Gly Val Leu Tyr Val Val
 320 325 330
 Tyr Ser Thr Gly Gly Gln Gly Pro His Arg Ile Thr Cys Ile Tyr
 335 340 345
 Asp Pro Leu Gly Thr Ile Ser Glu Glu Asp Leu Pro Asn Leu Phe
 350 355 360
 Phe Pro Lys Arg Pro Arg Ser His Ser Met Ile His Tyr Asn Pro
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 395 400

<210> 368

<211> 2281

<212> DNA

<213> Homo sapiens

<400> 368

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 cctcttttca gttcatcaag ttcacatgat atttgagtgc ccaactctgtg 2200
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369
 <211> 447
 <212> PRT
 <213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu	1	5	10	15
Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly	20	25	30	
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln	35	40	45	
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys	50	55	60	
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His	65	70	75	
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser	80	85	90	
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu	95	100	105	
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys	110	115	120	
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu	125	130	135	
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala	140	145	150	
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys	155	160	165	
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro	170	175	180	
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly	185	190	195	
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr	200	205	210	
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile	215	220	225	
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys	230	235	240	

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370

<211> 1415

<212> DNA

<213> Homo sapiens

<400> 370

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ccacgcgagt ctcaatcatg ctctcctag taactgtgtc tgactgtgct 150
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atttttaggc gcttgccctgg tctcaggata cccaccatcc ttttctgag 450
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<210> 371
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 371
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 Val Ser Asp Cys Ala Val Ile Thr Gly Ala Cys Glu Arg Asp Val
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 Gln Cys Gly Ala Gly Thr Cys Cys Ala Ile Ser Leu Trp Leu Arg
 35 40 45
 Gly Leu Arg Met Cys Thr Pro Leu Gly Arg Glu Gly Glu Glu Cys
 50 55 60
 His Pro Gly Ser His Lys Val Pro Phe Phe Arg Lys Arg Lys His
 65 70 75

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 372
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 cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
 acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtacctg 200
 gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
 aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
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 agcatgttgg accagctggg cgtccccctc tatgcagtgg taaaggagca 400
 catcaggact gaagtgaagg atttccagcc ttatttcaaa ggagaaatct 450
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 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373

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Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu
				20					25					30
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala
				35					40					45
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu
				50					55					60
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala
				65					70					75
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu
				80					85					90
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu
				95					100					105
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu
				110					115					120
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp
				125					130					135
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe
				140					145					150
Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala
				155					160					165
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile
				170					175					180
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu
				185					190					195
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu
				200					205					210
Ser	Val	Leu	Glu	Ala	Ala	Lys	Met	Ile	Lys	Pro	Gln	Thr	Leu	Ala
				215					220					225

Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374

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 cctgccgttc ctgctggccc gctggggcgc agcctggggg caaatacaga 250
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<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

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Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser	35	40	45	
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile	50	55	60	
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly	65	70	75	
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu	80	85	90	
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala	Ala	95	100	105	
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys	110	115	120	

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376
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tttctgtcac tattattatt gttggatgt gaagctattt ggagatccaa 150
ttcaggaagc aacacatttg agaattggcta ctttctatca agaaataaag 200
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accaaaagctg tcaaaaccac aggcaaggcg atagttaaag gacggaatct 300
tgactcaaga gggtaattc ttggtgctga agcctggggc aggggtgtaa 350
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tagtattacc ttagtgtaat gtatccctgt catatataca ataaggtgaa 450
attataagta cccatgcag ttggctggac agttctaaat tggactttat 500
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atcgatata gttagaatag gaaatatgac 650
attagaaagg aagaatgaca gggagaaaagg aaagaaggga aaatgttgcc 700
aaggaaaaaa aaa 713

<210> 377
<211> 90
<212> PRT
<213> Homo sapiens

<400> 377
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Ile Trp Arg Ser Asn Ser Gly Ser Asn Thr Leu Glu Asn Gly Tyr
20 25 30
Phe Leu Ser Arg Asn Lys Glu Asn His Ser Gln Pro Thr Gln Ser
35 40 45
Ser Leu Glu Asp Ser Val Thr Pro Thr Lys Ala Val Lys Thr Thr
50 55 60
Gly Lys Gly Ile Val Lys Gly Arg Asn Leu Asp Ser Arg Gly Leu
65 70 75
Ile Leu Gly Ala Glu Ala Trp Gly Arg Gly Val Lys Lys Asn Thr
80 85 90

<210> 378
<211> 3265
<212> DNA
<213> Homo sapiens

<400> 378
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 ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
 ttctacgtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaaatg 250
 tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaaagg 300
 ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350
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<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

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Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
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Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
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Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
				65					70					75
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr
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Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val
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Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
				110					115					120
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
				125					130					135
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly
				140					145					150
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe
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Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys
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Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn
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Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys
				200					205					210
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				260					265					270
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Lys Ile Ser Gln Arg Ile Val Cys Leu	305	Val Leu Asp Lys Ser Gly	310	315	
Ser Met Gly Gly Lys Asp Arg Leu Asn	320	Arg Met Asn Gln Ala Ala	325	330	
Lys His Phe Leu Leu Gln Thr Val Glu	335	Asn Gly Ser Trp Val Gly	340	345	
Met Val His Phe Asp Ser Thr Ala Thr	350	Ile Val Asn Lys Leu Ile	355	360	
Gln Ile Lys Ser Ser Asp Glu Arg Asn	365	Thr Leu Met Ala Gly Leu	370	375	
Pro Thr Tyr Pro Leu Gly Gly Thr Ser	380	Ile Cys Ser Gly Ile Lys	385	390	
Tyr Ala Phe Gln Val Ile Gly Glu Leu	395	His Ser Gln Leu Asp Gly	400	405	
Ser Glu Val Leu Leu Leu Thr Asp Gly	410	Glu Asp Asn Thr Ala Ser	415	420	
Ser Cys Ile Asp Glu Val Lys Gln Ser	425	Gly Ala Ile Val His Phe	430	435	
Ile Ala Leu Gly Arg Ala Ala Asp Glu	440	Ala Val Ile Glu Met Ser	445	450	
Lys Ile Thr Gly Gly Ser His Phe Tyr	455	Val Ser Asp Glu Ala Gln	460	465	
Asn Asn Gly Leu Ile Asp Ala Phe Gly	470	Ala Leu Thr Ser Gly Asn	475	480	
Thr Asp Leu Ser Gln Lys Ser Leu Gln	485	Leu Glu Ser Lys Gly Leu	490	495	
Thr Leu Asn Ser Asn Ala Trp Met Asn	500	Asp Thr Val Ile Ile Asp	505	510	
Ser Thr Val Gly Lys Asp Thr Phe Phe	515	Leu Ile Thr Trp Asn Ser	520	525	
Leu Pro Pro Ser Ile Ser Leu Trp Asp	530	Pro Ser Gly Thr Ile Met	535	540	
Glu Asn Phe Thr Val Asp Ala Thr Ser	545	Lys Met Ala Tyr Leu Ser	550	555	
Ile Pro Gly Thr Ala Lys Val Gly Thr	560	Trp Ala Tyr Asn Leu Gln	565	570	
Ala Lys Ala Asn Pro Glu Thr Leu Thr	575	Ile Thr Val Thr Ser Arg	580	585	
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Ser Thr Thr Ile

<210> 380

<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

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<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

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		20							25					30
Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Gln	Leu	Ala	Leu	
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Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
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Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
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Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
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Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	
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Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	
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Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	
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Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	
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His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	
				170					175					180	
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	
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Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	
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Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	
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Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	
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Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val
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Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg
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Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln
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Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu
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Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln
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<211> 25

<212> DNA

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<210> 383

<211> 26

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<210> 384

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<223> Synthetic oligonucleotide probe

<400> 385

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<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

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gatgagaggc tcacccctc ctgaagggtc gttgttctgc ttcctcaaga 700
aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750
gcagatcata tattttgttt caccattctt cttttgtaat aaattttgaa 800
tgtgcttgaa agtgaaaagc aatcaattat accaccaac accactgaaa 850
tcataagcta ttcacgactc aaaatattct aaaatatttt tctgacagta 900
tagtgtataa atgtggtcat gtggtatttg tagttattga ttttaagcatt 950
tttagaata agatcaggca tatgtatata ttttcacact tcaagacct 1000
aaggaaaaa aaattttcca gtggagaata catataatat ggtgtagaaa 1050
tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatatg 1100
actaagtaaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200
gttgattata tattttctga atatcagccc ctaataggac aattctattt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300
agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

Met	Leu	Trp	Leu	Leu	Phe	Phe	Leu	Val	Thr	Ala	Ile	His	Ala	Glu
1				5					10					15
Leu	Cys	Gln	Pro	Gly	Ala	Glu	Asn	Ala	Phe	Lys	Val	Arg	Leu	Ser
				20					25					30
Ile	Arg	Thr	Ala	Leu	Gly	Asp	Lys	Ala	Tyr	Ala	Trp	Asp	Thr	Asn
				35					40					45
Glu	Glu	Tyr	Leu	Phe	Lys	Ala	Met	Val	Ala	Phe	Ser	Met	Arg	Lys
				50					55					60
Val	Pro	Asn	Arg	Glu	Ala	Thr	Glu	Ile	Ser	His	Val	Leu	Leu	Cys
				65					70					75
Asn	Val	Thr	Gln	Arg	Val	Ser	Phe	Trp	Phe	Val	Val	Thr	Asp	Pro
				80					85					90
Ser	Lys	Asn	His	Thr	Leu	Pro	Ala	Val	Glu	Val	Gln	Ser	Ala	Ile
				95					100					105
Arg	Met	Asn	Lys	Asn	Arg	Ile	Asn	Asn	Ala	Phe	Phe	Leu	Asn	Asp
				110					115					120
Gln	Thr	Leu	Glu	Phe	Leu	Lys	Ile	Pro	Ser	Thr	Leu	Ala	Pro	Pro
				125					130					135
Met	Asp	Pro	Ser	Val	Pro	Ile	Trp	Ile	Ile	Ile	Phe	Gly	Val	Ile
				140					145					150
Phe	Cys	Ile	Ile	Ile	Val	Ala	Ile	Ala	Leu	Leu	Ile	Leu	Ser	Gly
				155					160					165
Ile	Trp	Gln	Arg	Arg	Arg	Lys	Asn	Lys	Glu	Pro	Ser	Glu	Val	Asp
				170					175					180
Asp	Ala	Glu	Asp	Lys	Cys	Glu	Asn	Met	Ile	Thr	Ile	Glu	Asn	Gly
				185					190					195
Ile	Pro	Ser	Asp	Pro	Leu	Asp	Met	Lys	Gly	Gly	Ile	Leu	Met	Met
				200					205					210

Pro Ser

<210> 388

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 388

aactcaaaact cctctctctg ggaaaacgcg gtgcttgctc ctcccgagat 50

ggcccttgga ggggtgttga gccctcggtc tgcccogtcc ggtctctggg 100
 gccaaaggctg ggtttccctc atgtatggca agagctctac togtgcggtg 150
 cttctctctc ttggcataca gctcacagct ctttggccta tagcagctgt 200
 ggaaatttat acctcccggg tgctggaggc tgtaaatggg acagatgctc 250
 ggttaaaatg cactttctcc agctttgccc ctgtgggtga tgctctaaca 300
 gtgacctgga attttctgct tctagacggg ggacctgagc agtttgtatt 350
 ctactaccac atagatccct tccaaccatc gaggggcggt ttaagagacc 400
 ggggtgtctg ggatgggaat cctgagcggt acgatgcctc catccttctc 450
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500
 cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550
 aacctgtacg cttctctgag atccacttcc tggtctgtgc cattgctctc 600
 gctctgtcac tgatgatcat aatagtaatt gtatgtgtcc tctccagca 650
 ttaccggaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700
 aatcaaaaga agaggaaagg ctcaaccaag agaaaaaggt ctctgtttat 750
 ttagaagaca cagactaaca atttttagatg gaagctgaga tgatttccaa 800
 gaacaagaac cctagtattt ctggaagtta atgaaaactt tcttttggct 850
 tttccagttg tgaccggttt tccaaccagt tctgcagcat attagattct 900
 agacaagcaa caccctctg gagccagcac agtgctctc catatcacca 950
 gtcatacaca gctcattat taaggtctta ttaatttca gagtgtaaat 1000
 tttttcaagt gctcattagg ttttataaac aagaagctac attttgccc 1050
 ttaagacact acttacagtg ttatgacttg tatacacata tattgttato 1100
 aaaggggata aaagccaatt tgtctgttac atttcttctc acgtatttct 1150
 tttagacga cttctgtac taaagttaat gtgtttactc tcttctctc 1200
 ccacattctc aattaaaagg tgagctaagc ctctcgggtg tttctgatta 1250
 acagtaaatc ctaaattcaa actgttaaat gacattttta tttttatgtc 1300
 tctccttaac tatgagacac atctgtgttt actgaatttc tttcaatatt 1350
 ccaggtgata gattttgtc g 1371

<210> 389

<211> 215

<212> PRT

<213> Homo sapiens

<400> 389

Met Tyr Gly Lys Ser Ser Thr Arg Ala Val Leu Leu Leu Gly
 1 5 10 15

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 390
 ccgaggccat cttagaggcca gaggc 24

<210> 391
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 391
 acaggcagag ccaatggcca gaggc 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
 gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
 gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50
 agcagtcctg gtactcttgg gagtttccat cttcttggtc tctgccaga 100
 atccgacaac agctgctcca gctgacacgt atccagctac tggctcctgt 150
 gatgatgaag ccctgatgc tgaaaccact gctgctgcaa ccactgcgac 200
 cactgtctgt cctaccactg caaccaccgc tgcttctacc actgctcgta 250
 aagacattcc agttttacc aaatgggttg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgct tcctgtgatt tcatccaact acttaccttg cctacgatat 400
 cccctttatc tctaatacgt ttattttctt tcaataaaaa aataactatg 450
 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
 1 5 10
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Pro Ala Asp Thr
 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
 65 70 75
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
 <211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
gtccctgat ctcatgtca ccacc 25

<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
caggacaca ctctaccatt cgggag 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

<400> 398
ggactctgaa ggtcccaagc agctgctgag gcccccaagg aagtggttcc 50

aaccttgagc ccctaggggt ctggatttgc tggtaacaa gataacctga 100

gggcaggacc ccctagggga atgctacctc ctgcccttcc acctgccctg 150

gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200

ggacgcagag gacgctcaca gactccagcc ctttgttacc gagaggacac 250

ttggcaaggt ccagcgatgg tcgggagtcc acacacagac tggcggcagg 300

gcaggagggg gacagtctct tttgtcttgg ttggacagta agagggtctt 350

ggccagtgca ggggtggggg cggcaaaact cataaagaac cagagggtct 400

gggccccggc cacagagtca tctgccagc tcctctctct ctggccagtg 450

ggagtgagac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500

gcctgcgggc catggtcctt gtctagggca gcaattctca acctctcttc 550

tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600

agcaattaaa actgagaaat gggccgggca cgggtgctca gcctgtgta 650

ccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccacag aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399

<211> 120

<212> PRT

<213> Homo sapiens

<400> 399

Met	Leu	Pro	Pro	Ala	Leu	Pro	Pro	Ala	Leu	Val	Phe	Thr	Val	Ala	
1				5					10					15	
Trp	Ser	Leu	Leu	Ala	Glu	Arg	Val	Ser	Trp	Val	Arg	Asp	Ala	Glu	
				20					25					30	
Asp	Ala	His	Arg	Leu	Gln	Pro	Phe	Val	Thr	Glu	Arg	Thr	Leu	Gly	
				35					40					45	
Lys	Val	Gln	Arg	Trp	Ser	Gly	Val	His	Thr	Gln	Thr	Gly	Gly	Arg	
				50					55					60	
Ala	Gly	Gly	Gly	Gln	Phe	Cys	Cys	Ala	Trp	Leu	Asp	Ser	Lys	Arg	
				65					70					75	
Val	Leu	Ala	Ser	Pro	Gly	Trp	Gly	Ala	Ala	Asn	Ser	Ile	Lys	Asn	
				80					85					90	
Gln	Arg	Val	Trp	Ala	Pro	Ala	Thr	Glu	Ser	Ser	Ala	Gln	Leu	Leu	
				95					100					105	
Cys	Cys	Trp	Pro	Val	Gly	Val	Ala	Arg	Gly	Gly	Ala	Leu	Cys	Gln	
				110					115					120	

<210> 400

<211> 893

<212> DNA

<213> Homo sapiens

<400> 400

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 ccggcctgcc tcagcggccc ccattggcgg ccagaaactg gcacagcatg 100
 aggagctgac cctgctcttc catgggaccc tgcagctggg ccaggccctc 150
 aacggtgtgt acaggaccac ggaggggacgg ctgacaaagg ccaggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 ggggccggga tgagcccgag gaacttcggg caagcctggt ggagactcag 300
 atgaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggagggt gccacggcac agaaggtgct acgggacagc gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450
 gaggtcttaa aggctcacgc tgacaagcag agccacatcc tatgggccct 500
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgccttg atggaactga ggaccaatca tgctgcaagg aacacttcca 650
 cgccccgtga ggccccctgt cagggaggag ctgcctgttc actgggatca 700
 gccaggggcg cgggccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggagaggat gtagcccat tggggagggg tggaggaagg 800
 acatgtaccc ttctatgcct acacaccct cattaaagca gagtctgtgc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401

<211> 198

<212> PRT

<213> Homo sapiens

<400> 401

Met	Pro	Val	Pro	Ala	Leu	Cys	Leu	Leu	Trp	Ala	Leu	Ala	Met	Val
1				5					10				15	
Thr	Arg	Pro	Ala	Ser	Ala	Ala	Pro	Met	Gly	Gly	Pro	Glu	Leu	Ala
				20					25				30	
Gln	His	Glu	Glu	Leu	Thr	Leu	Leu	Phe	His	Gly	Thr	Leu	Gln	Leu
				35					40				45	
Gly	Gln	Ala	Leu	Asn	Gly	Val	Tyr	Arg	Thr	Thr	Glu	Gly	Arg	Leu
				50					55				60	
Thr	Lys	Ala	Arg	Asn	Ser	Leu	Gly	Leu	Tyr	Gly	Arg	Thr	Ile	Glu
				65					70				75	
Leu	Leu	Gly	Gln	Glu	Val	Ser	Arg	Gly	Arg	Asp	Ala	Ala	Gln	Glu
				80					85				90	
Leu	Arg	Ala	Ser	Leu	Leu	Glu	Thr	Gln	Met	Glu	Glu	Asp	Ile	Leu
				95					100				105	
Gln	Leu	Gln	Ala	Glu	Ala	Thr	Ala	Glu	Val	Leu	Gly	Glu	Val	Ala
				110					115				120	
Gln	Ala	Gln	Lys	Val	Leu	Arg	Asp	Ser	Val	Gln	Arg	Leu	Glu	Val
				125					130				135	
Gln	Leu	Arg	Ser	Ala	Trp	Leu	Gly	Pro	Ala	Tyr	Arg	Glu	Phe	Glu
				140					145				150	
Val	Leu	Lys	Ala	His	Ala	Asp	Lys	Gln	Ser	His	Ile	Leu	Trp	Ala
				155					160				165	
Leu	Thr	Gly	His	Val	Gln	Arg	Gln	Arg	Arg	Glu	Met	Val	Ala	Gln
				170					175				180	
Gln	His	Arg	Leu	Arg	Gln	Ile	Gln	Glu	Arg	Leu	His	Thr	Ala	Ala

Leu Pro Ala

<210> 402

<211> 1915

<212> DNA

<213> Homo sapiens

<400> 402

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 tgtaatttgc atcctggtga tcaccttact cctggaccag accaccaaggc 100
 acacatccag attaaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150
 aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200
 tgccttgaag gaaattcaag cctgcagac agtctgtctc cgaggcacta 250
 aagttcacaa gaaatgtctac ctgtcttcag aaggtttgaa gcatttccat 300
 gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
 gaactccgag gaaatcaacg cctccaaga ctatggtaaa aggagcctgc 400
 cagggtgcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450
 aagtttgttg acgtcaacgg aatcgctatc tccttctctc actgggacgc 500
 tgcacagcct aacgggtgca agcgagaaaa ctgtgtcctg ttctcccaat 550
 cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600
 atatgcgagt tcaccatccc taaataggtc ttctccaat gtgtctcca 650
 agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
 aatcataatt ttactttatt aaaaaattgc aacacaagat caatgtccat 750
 agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800
 tgccttctct ggggtatagg ggaacagaaa tattgatcca tgtgcacgca 850
 gataaaatgg cttctgctaa acagactaaa atctttctct ctagtcttct 900
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 ctcatcactc tagaaaagca agcttaggct acctgaaaga ttttcccttg 1000
 gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050
 aggtgtctata taatccaaaa acttttcagc ctgttgctca tctgtccca 1100
 tgtgtgcaat aataccttgt cagcccatca ccttatttt gaattgtctc 1150
 atctctctgt gggacttgta tctgtctgc catatcagaa cacaaaaccc 1200
 tgaagagggt ctgatttgat tttttttttt tcttcatgcc taccttttt 1250
 ttggaagtgt ccagccgcaa ttgaaatga aatgacaagg tgtatatattg 1300

atcaattttc attccacca ttgcattaca acctctaact taaatgggta 1350
 accctaaggc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400
 aaaagaacct acattttattt tgcttttagca tccttactct caccctttat 1450
 gagattgaga gtggacttac atttcctttt ttacattttc gtatatttat 1500
 ttttttttagc catcattata tgtttaagtc tattatgggc aaccaatctt 1550
 tggaagctga aaactgaatt taaagaatgc tatcttgga aatgcatac 1600
 gtctgtgcaa ttttttattc tgcttagtgc tattctgctt gttaaactag 1650
 attgtacaaa ataacttcat tgcttaatat caaattacaa agttagaact 1700
 tggagggaaa tgggcttttt agaagcaaac aattttaaat atattttgtt 1750
 cttcaataaa atagtgttta aacattgaat gtgtttgtg aacaatatcc 1800
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850
 tcattgctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 403

<211> 206

<212> PRT

<213> Homo sapiens

<400> 403

Met	Ala	Gln	Gln	Ala	Cys	Pro	Arg	Ala	Met	Ala	Lys	Asn	Gly	Leu	1	5	10	15
Val	Ile	Cys	Ile	Leu	Val	Ile	Thr	Leu	Leu	Leu	Asp	Gln	Thr	Thr	20	25	30	
Ser	His	Thr	Ser	Arg	Leu	Lys	Ala	Arg	Lys	His	Ser	Lys	Arg	Arg	35	40	45	
Val	Arg	Asp	Lys	Asp	Gly	Asp	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Leu	50	55	60	
Trp	Thr	Glu	Val	Asn	Ala	Leu	Lys	Glu	Ile	Gln	Ala	Leu	Gln	Thr	65	70	75	
Val	Cys	Leu	Arg	Gly	Thr	Lys	Val	His	Lys	Lys	Cys	Tyr	Leu	Ala	80	85	90	
Ser	Glu	Gly	Leu	Lys	His	Phe	His	Glu	Ala	Asn	Glu	Asp	Cys	Ile	95	100	105	
Ser	Lys	Gly	Gly	Ile	Leu	Val	Ile	Pro	Arg	Asn	Ser	Asp	Glu	Ile	110	115	120	
Asn	Ala	Leu	Gln	Asp	Tyr	Gly	Lys	Arg	Ser	Leu	Pro	Gly	Val	Asn	125	130	135	
Asp	Phe	Trp	Leu	Gly	Ile	Asn	Asp	Met	Val	Thr	Glu	Gly	Lys	Phe	140	145	150	
Val	Asp	Val	Asn	Gly	Ile	Ala	Ile	Ser	Phe	Leu	Asn	Trp	Asp	Arg				

155	160	165
Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser		
170	175	180
Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser		
185	190	195
Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys		
200	205	

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
 cctggttatc cccaggaact cgcac 25

<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacagcg ctc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 cgccctccaa gactatggta aaagagcgct gccaggtgtc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
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 ttccccgcgc gccccgagcc cccgcgccat gaagctcgcc gccctcctgg 100
 ggctctgcgt ggcctgttcc tgcagctccg ctgctgcttt cttagtgggc 150
 tcggccaagc ctgtggccca gcctgtgctc gcgctggagt cggcggcgga 200
 ggccggggcc gggaccctgg ccaacccctc cggcaccctc aaccgcgtga 250
 agctctcgtc gacgagcctg ggcacccccc tgaaccacct catagagggc 300
 tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400
 ctggagcatc tacacctgag gacaagacgc tgcccacccg cgagggctga 450
 aaaccccgcc gcggggagga cgttccatcc ctttcccccg gccctctcca 500
 ataacgttg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408

<211> 104

<212> PRT

<213> Homo sapiens

<400> 408

Met	Lys	Leu	Ala	Ala	Leu	Leu	Gly	Leu	Cys	Val	Ala	Leu	Ser	Cys
1				5					10					15
Ser	Ser	Ala	Ala	Ala	Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala
				20					25					30
Gln	Pro	Val	Ala	Ala	Leu	Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly
				35					40					45
Thr	Leu	Ala	Asn	Pro	Leu	Gly	Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu
				50					55					60
Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	Asn	His	Leu	Ile	Glu	Gly	Ser
				65					70					75
Gln	Lys	Cys	Val	Ala	Glu	Leu	Gly	Pro	Gln	Ala	Val	Gly	Ala	Val
				80					85					90
Lys	Ala	Leu	Lys	Ala	Leu	Leu	Gly	Ala	Leu	Thr	Val	Phe	Gly	
				95					100					

<210> 409

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 409

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 aagggaggca ctcttggcc tccgcagccg atcacatgaa ggtggtgcca 100
 agtctctcgc tctccgtcct cctggcacag gtgtggctgg taccggctt 150
 ggccccagct cctcagtcgc cagagacccc agccctcag aaccagacca 200
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250
 agcgaggaga aggccggtga ggaagagaaa gcctggctga tggccagcag 300
 gcagcagctt gccaaggaga cttcaaaactt cggattcagc ctgctgcgaa 350
 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttggcatg 400
 tccttggcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450
 ccagatcaag agagggtccc acttgcagge cctgaagccc accaagcccc 500

ggctcctgcc ttccctcttt aagggaactca gagagaccct ctcccgcaac 550
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 tgatgtcaaa gagactttct tcaattttat caagagggtat tttgatacag 650
 agtgcgtgcc tatgaatttt cgcaatgcct cacaggccaa aaggctcatg 700
 aatcattaca ttaacaaaga gactcggggg aaaattccca aactgtttga 750
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 aagggaatg gttgacccca tttgacctg tcttcacoga agtcgacact 850
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 atgggtgacc acctcgccct tgaagactac ctgaccacag acttggttga 1050
 gacatggctc agaaacatga aaaccagaaa catggaagtt ttctttccga 1100
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 aagttgatga aaggggcact gaggcagtg caggaatctt gtcagaaatt 1300
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 agactcgaca aagcaaaacc atggataagg gaggactact acaaaagcat 2050
 taaattgata catatttttt aaaaaaaaaa aaaaaaaaaa 2089

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
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Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile
				80					85					90
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met
				95					100					105
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr
				110					115					120
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro
				125					130					135
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu
				140					145					150
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe
				155					160					165
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn
				170					175					180
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe
				185					190					195
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn
				200					205					210
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Phe	Asp	Glu	Ile	Asn	
				215					220				225	
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly
				230					235					240
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr
				245					250					255
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr
				260					265					270
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys
				275					280					285

His Val Leu Lys Leu Pro Tyr Gln Gly Asn Ala Thr Met Leu Val
 290 295 300
 Val Leu Met Glu Lys Met Gly Asp His Leu Ala Leu Glu Asp Tyr
 305 310 315
 Leu Thr Thr Asp Leu Val Glu Thr Trp Leu Arg Asn Met Lys Thr
 320 325 330
 Arg Asn Met Glu Val Phe Phe Pro Lys Phe Lys Leu Asp Gln Lys
 335 340 345
 Tyr Glu Met His Glu Leu Leu Arg Gln Met Gly Ile Arg Arg Ile
 350 355 360
 Phe Ser Pro Phe Ala Asp Leu Ser Glu Leu Ser Ala Thr Gly Arg
 365 370 375
 Asn Leu Gln Val Ser Arg Val Leu Arg Arg Thr Val Ile Glu Val
 380 385 390
 Asp Glu Arg Gly Thr Glu Ala Val Ala Gly Ile Leu Ser Glu Ile
 395 400 405
 Thr Ala Tyr Ser Met Pro Pro Val Ile Lys Val Asp Arg Pro Phe
 410 415 420
 His Phe Met Ile Tyr Glu Glu Thr Ser Gly Met Leu Leu Phe Leu
 425 430 435
 Gly Arg Val Val Asn Pro Thr Leu Leu
 440

<210> 411

<211> 636

<212> DNA

<213> Homo sapiens

<400> 411

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 tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
 gtcaaacact ggccctcaga gcaggaccca gagaaggcct gggcgcccg 200
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 ccaaatcacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
 ccacccccag tagggctcca ggggccatca ctgccccgcg cctgtcccaa 550
 ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600

aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met	Arg	Arg	Leu	Leu	Leu	Val	Thr	Ser	Leu	Val	Val	Val	Leu	Leu
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Trp	Glu	Ala	Gly	Ala	Val	Pro	Ala	Pro	Lys	Val	Pro	Ile	Lys	Met
				20					25					30

Gln	Val	Lys	His	Trp	Pro	Ser	Glu	Gln	Asp	Pro	Glu	Lys	Ala	Trp
				35					40					45

Gly	Ala	Arg	Val	Val	Glu	Pro	Pro	Glu	Lys	Asp	Asp	Gln	Leu	Val
				50					55					60

Val	Leu	Phe	Pro	Val	Gln	Lys	Pro	Lys	Leu	Leu	Thr	Thr	Glu	Glu
				65					70					75

Lys	Pro	Arg	Gly	Gln	Gly	Arg	Gly	Pro	Ile	Leu	Pro	Gly	Thr	Lys
				80					85					90

Ala	Trp	Met	Glu	Thr	Glu	Asp	Thr	Leu	Gly	Arg	Val	Leu	Ser	Pro
				95					100					105

Glu	Pro	Asp	His	Asp	Ser	Leu	Tyr	His	Pro	Pro	Pro	Glu	Glu	Asp
				110					115					120

Gln	Gly	Glu	Glu	Arg	Pro	Arg	Leu	Trp	Val	Met	Pro	Asn	His	Gln
				125					130					135

Val	Leu	Leu	Gly	Pro	Glu	Glu	Asp	Gln	Asp	His	Ile	Tyr	His	Pro
				140					145					150

Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

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aggagctctc tgtacccaag gaaagtgacg ctgagactca gacaagatta 100

caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150

tggagtacag atgaggctaa tacttacttc aaggaatgga cctgttcttc 200

gtctccatct ctgccagaa gctgcaagga aatcaaagac gaatgtccta 250

gtgcatttga tggcctgtat ttctccgca ctgagaatgg tgttatctac 300

cagaccttct gtgacatgac ctctgggggt ggcggtgga ccctgggtgc 350

cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcgatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
 tggggcaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatact 550
 ggcacgtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600
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 ggactgacaa cggcccggtg atccctgtgg tctatgattt tggcgagcc 750
 cagaaaacag catottatta ctaccctat ggccagcggg aattcaactgc 800
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccaacgcct 850
 tgtgtgctgg aatgagggtc accggatgta acaactgagca tcaactgcatt 900
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 ttctggtttt gattggagtg gatattggaac tcatgttggt tacagcagca 1000
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<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

Met	Asn	Gln	Leu	Ser	Phe	Leu	Leu	Phe	Leu	Ile	Ala	Thr	Thr	Arg
1				5					10					15
Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys

125	130	135
Asn Pro Gly Tyr Tyr Asp Ile Gln Ala	Lys Asp Leu Gly Ile Trp	
140	145	150
His Val Pro Asn Lys Ser Pro Met Gln	His Trp Arg Asn Ser Ser	
155	160	165
Leu Leu Arg Tyr Arg Thr Asp Thr Gly	Phe Leu Gln Thr Leu Gly	
170	175	180
His Asn Leu Phe Gly Ile Tyr Gln Lys	Tyr Pro Val Lys Tyr Gly	
185	190	195
Glu Gly Lys Cys Trp Thr Asp Asn Gly	Pro Val Ile Pro Val Val	
200	205	210
Tyr Asp Phe Gly Asp Ala Gln Lys Thr	Ala Ser Tyr Tyr Ser Pro	
215	220	225
Tyr Gly Gln Arg Glu Phe Thr Ala Gly	Phe Val Gln Phe Arg Val	
230	235	240
Phe Asn Asn Glu Arg Ala Ala Asn Ala	Leu Cys Ala Gly Met Arg	
245	250	255
Val Thr Gly Cys Asn Thr Glu His His	Cys Ile Gly Gly Gly Gly	
260	265	270
Tyr Phe Pro Glu Ala Ser Pro Gln Gln	Cys Gly Asp Phe Ser Gly	
275	280	285
Phe Asp Trp Ser Gly Tyr Gly Thr His	Val Gly Tyr Ser Ser Ser	
290	295	300
Arg Glu Ile Thr Glu Ala Ala Val Leu	Leu Phe Tyr Arg	
305	310	

<210> 415

<211> 1281

<212> DNA

<213> Homo sapiens

<400> 415

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 tcggcgcgcg aggtgcttgg gccgcgctgc tctgggggac gctgcagggtg 150
 ctagcgctgc tggggggcgc ccatgaaagc gcagccatgg cggcacatgc 200
 aaacatagag aattctgggc ttccacacaa ctccagtgt aactcaacag 250
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ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550
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 aacatgatgc catcatttaa ggaatccat ggaccaagga tggaatacag 750
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 tattctcttt ttgaaatag tataaacagg coatgcatat aatgtacagt 850
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 tgaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950
 gttcatagta agacaaacaa gtctatctt ttttttttgg ctggggtggg 1000
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 tttgggtatc tttttagct cacataaaga acttcagtgc ttttcagagc 1150
 tggatatate ttaattacta atgccacaca gaaattatac aatcaaaacta 1200
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<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

Met	Gly	Leu	Gly	Ala	Arg	Gly	Ala	Trp	Ala	Ala	Leu	Leu	Leu	Gly	15
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Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala	30
				20					25						
Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His	45
				35					40						
Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser	60
				50					55						
Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr	75
				65					70						
Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys	90
				80					85						
Pro	Thr	Ala	Ala	Ser	Asn	Thr	Thr	Thr	Pro	Gly	Met	Val	Ser	Thr	105
				95					100						
Asn	Met	Thr	Ser	Thr	Thr	Leu	Lys	Ser	Thr	Pro	Lys	Thr	Thr	Ser	120
				110					115						
Val	Ser	Gln	Asn	Thr	Ser	Gln	Ile	Ser	Thr	Ser	Thr	Met	Thr	Val	

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr	Ile		
	140		145		150
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe	Asp		
	155		160		165
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val	Leu		
	170		175		180
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg	Gly		
	185		190		195
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200		205		

<210> 417

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 417

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cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200

ccgccaagaa ttctgaggat gtcagatgta aatgtatctg cctccctat 250

aaagaaaatt ctgggcatat ttataataag aacatatctc agaaagattg 300

tgattgcctt catgtttgtg agcccatgcc tgtgcggggg cctgatgtag 350

aagcatactg tctacgctgt gaatgcaaat atgaagaaag aagctctgtc 400

acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450

tctgtacatg gtatatctta ctctggttga gcccatactg aagaggcgcc 500

tcttttgaca tgcacagttg atacagagtg atgatgatat tggggatcac 550

cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600

caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650

tccaagagca gcgaaagtct gtctttgacc ggcattgtgt cctcagctaa 700

ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750

agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800

ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850

ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900

aaagtgcagc aataagtctt ttctattttg tgacttttac taataaaaaa 950

aaatctgcct gtaaattatc ttgaagtcct ttacctggaa caagcactct 1000

ctttttcacc acatagtttt aacttgactt tcaagataat tttcagggtt 1050
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 tgcctgggaa gtggttaaca acttttttca agtcacttta ctaaacaaac 1150
 ttttgtaaat agaccttacc ttctattttc gagtttcatt tatattttgc 1200
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 tgactgtatt atctgggtat ctgctgtgtc tgcacttcac ggtaaacggg 1300
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 tgtgatgtct gatgcaatgc atoctagaac aaactggcca ttgtctagt 1400
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 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaaccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggctcgtggg gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggtcgg ggttggtggg gcctctctcg aaaggtctaa 1650
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 acaataaaaa taatttttga aacatcaa 1728

<210> 418

<211> 198

<212> PRT

<213> Homo sapiens

<400> 418

Met	Ala	Thr	Leu	Trp	Gly	Gly	Leu	Leu	Arg	Leu	Gly	Ser	Leu	Leu
1				5					10					15
Ser	Leu	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Leu	Ala	Gln	Leu
				20					25					30
Ser	Asp	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile
				35					40					45
Cys	Pro	Pro	Tyr	Lys	Glu	Asn	Ser	Gly	His	Ile	Tyr	Asn	Lys	Asn
				50					55					60
Ile	Ser	Gln	Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met
				65					70					75
Pro	Val	Arg	Gly	Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu
				80					85					90
Cys	Lys	Tyr	Glu	Glu	Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile
				95					100					105
Ile	Ile	Tyr	Leu	Ser	Ile	Leu	Gly	Leu	Leu	Leu	Leu	Tyr	Met	Val
				110					115					120
Tyr	Leu	Thr	Leu	Val	Glu	Pro	Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly
				125					130					135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln
140 145 150

Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg
155 160 165

Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys
170 175 180

Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val
185 190 195

Val Leu Ser

<210> 419
<211> 681
<212> DNA
<213> Homo sapiens

<400> 419
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tcgctctggc ttctgggctt gtcctggctc tgctcgctgt gctgcccaag 100
gccttctctg ccgcggggaa gcgcgaggag ccgcgcgcga cacttgaagg 150
aaaattgggc cgatttcac ctatgatgca tcatcaccag gcaccttcag 200
atggccagac tctctgggct cgtttccaga ggtctcacct tgccgaggca 250
tttgcaaaag ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300
aagaggctct atggggcaga ttattccaat ctacggtttt gggatttttt 350
tatatatata gtacattcta tttaaggtaa gtagaatcat cctaatacata 400
ttacatcaat gaaaatctaa tatggcgata aaaatcattg totacattaa 450
aacttcttat agttcataaa attatttcaa atccatcatc totttaaatc 500
ctgcctcttc ttcatgagggt acttaggata gccattattt cagtttcaca 550
taagaatggt tactcaatgt ttaagtgttt tgccccaaaa ttcacaacta 600
acaaggcaga actaggactt gaacatggat cttttggttc ttaatccagt 650
gagtgatata attcaatgca ctcccctgcc a 681

<210> 420
<211> 128
<212> PRT
<213> Homo sapiens

<400> 420
Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
1 5 10 15

Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
20 25 30

Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
35 40 45

Arg Phe Pro Pro Met Met His His His Gln Ala Pro Ser Asp Gly
50 55 60

Gln Thr Pro Gly Ala Arg Phe Gln Arg Ser His Leu Ala Glu Ala
65 70 75

Phe Ala Lys Ala Lys Gly Ser Gly Gly Gly Ala Gly Gly Gly Gly
80 85 90

Ser Gly Arg Gly Leu Met Gly Gln Ile Ile Pro Ile Tyr Gly Phe
95 100 105

Gly Ile Phe Leu Tyr Ile Leu Tyr Ile Leu Phe Lys Val Ser Arg
110 115 120

Ile Ile Leu Ile Ile Leu His Gln
125

<210> 421

<211> 1630

<212> DNA

<213> Homo sapiens

<400> 421

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gctcttcac ttggatttga aagttgagag cagcatgttt tgcccactga 100

aactcatcct gctgccagtg ttactggatt attccttggg cctgaatgac 150

ttgaatgttt ccccgctga gctaacagtc catgtgggtg attcagctct 200

gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250

actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300

tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350

cttgatgggg gacatcttat gcaatgatgg ctctctcctg ctccaagatg 400

tgcaagaggg tgaccagga acctatatct gtgaaatccg cctcaaaggg 450

gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500

gccccaaagag ctcatggtcc atgtgggtgg attgattcag atgggatgtg 550

ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600

tcaggacggc gcgcaaagga ggagattgta ttctgttact accacaaact 650

caggatgtct gtggagtact cccagagctg gggccaactc cagaatcgtg 700

tgaacctggt gggggacatt ttccgcaatg acggttccat catgttcaa 750

ggagtggagg agtcagatgg aggaactac acctgcagta tccacctagg 800

gaacctggtg ttcaagaaaa coattgtgct gcattgtcag ccggaagagc 850

ctcgaacct ggtgaccccg gcagccctga ggcctctggt cttgggtggt 900

aatcagttgg tgatcattgt ggaattgtc tgtgccaaa tctgtctgtc 950

ccctgttctg atattgatcg tgaagaagac ctgtggaaat aagatttcag 1000

tgaattctac agtcttgggtg aagaacacga agaagactaa tccagagata 1050
 aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattta 1100
 ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtga 1150
 aatcagaggc cacctacatg accatgcacc cagtttggcc ttctctgagg 1200
 tcagatcgga acaactcact tgaaaaaaag tcagggtggg gaatgccaaa 1250
 aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
 ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatctc 1350
 agactcccg ctcctccagct gtctcctgt ctcattgttt ggtcaataca 1400
 ctgaagatgg agaatttggg gcctggcaga gagactggac agctctggag 1450
 gaacaggcct gctgagggga ggggagcatg gacttgccct ctggagtggg 1500
 acaactggcc tggaaccag gctgagctga gtggcctcaa acccccccgt 1550
 ggtacagacc ctctgtgtgg caggttctt agtggtatgag ttactgggaa 1600
 gaatcagaga taaaaaccaa ccaaatcaa 1630

<210> 422

<211> 394

<212> PRT

<213> Homo sapiens

<400> 422

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Tyr	Ser	Leu	Gly	Leu	Asn	Asp	Leu	Asn	Val	Ser	Pro	Pro	Glu	Leu	
				20					25					30	
Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln	
				35					40					45	
Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser	
				50					55					60	
Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser	
				65					70					75	
Asn	Leu	Ser	Val	Pro	Ile	Gly	Arg	Phe	Gln	Asn	Arg	Val	His	Leu	
				80					85					90	
Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp	
				95					100					105	
Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	
				110					115					120	
Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	
				125					130					135	
Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	
				140					145					150	
Ile	Gln	Met	Gly	Cys	Val	Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	

	155		160		165
Thr Lys Val Glu	Trp Ile Phe Ser Gly	Arg Arg Ala Lys Glu			
	170		175		180
Ile Val Phe Arg	Tyr Tyr His Lys Leu	Arg Met Ser Val Glu Tyr			
	185		190		195
Ser Gln Ser Trp	Gly His Phe Gln Asn	Arg Val Asn Leu Val Gly			
	200		205		210
Asp Ile Phe Arg	Asn Asp Gly Ser Ile	Met Leu Gln Gly Val Arg			
	215		220		225
Glu Ser Asp Gly	Gly Asn Tyr Thr Cys	Ser Ile His Leu Gly Asn			
	230		235		240
Leu Val Phe Lys	Lys Thr Ile Val Leu	His Val Ser Pro Glu Glu			
	245		250		255
Pro Arg Thr Leu	Val Thr Pro Ala Ala	Leu Arg Pro Leu Val Leu			
	260		265		270
Gly Gly Asn Gln	Leu Val Ile Ile Val	Gly Ile Val Cys Ala Thr			
	275		280		285
Ile Leu Leu Leu	Pro Val Leu Ile Leu	Ile Val Lys Lys Thr Cys			
	290		295		300
Gly Asn Lys Ser	Ser Val Asn Ser Thr	Val Leu Val Lys Asn Thr			
	305		310		315
Lys Lys Thr Asn	Pro Glu Ile Lys Glu	Lys Pro Cys His Phe Glu			
	320		325		330
Arg Cys Glu Gly	Glu Lys His Ile Tyr	Ser Pro Ile Ile Val Arg			
	335		340		345
Glu Val Ile Glu	Glu Glu Glu Pro Ser	Glu Lys Ser Glu Ala Thr			
	350		355		360
Tyr Met Thr Met	His Pro Val Trp Pro	Ser Leu Arg Ser Asp Arg			
	365		370		375
Asn Asn Ser Leu	Glu Lys Lys Ser Gly	Gly Gly Met Pro Lys Thr			
	380		385		390
Gln Gln Ala Phe					

<210> 423

<211> 963

<212> DNA

<213> Homo sapiens

<400> 423

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ctctgagctc agttgcagta ctcgggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaac cagctctcgt ctccgttggc 250
 cctgcaccc cctcctgggtg gcgtgtgatg gctttgattc tgctgacct 300
 gtgcgtgggg atggttgtcg ggcgtgtggc tctggggatt tggctctgca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgcac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaaggtc ataatgcag cccctgtgac acaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcaciaa cttaacatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agcaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtggag 700
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
 aggaaatag aattgtgctt attttcataa tgggaaaatg caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850
 aaggtggacc aactacctta atgcaaagag gtggacagga taacacagat 900
 aagggtctta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
 aaaaaaaaa aaa 963

<210> 424

<211> 229

<212> PRT

<213> Homo sapiens

<400> 424

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Lys	Pro	Ala	Leu	Val	Ser	Val	Gly	Pro	Ala	Ser	Ser	Ser	Trp	Trp
				20					25					30
Arg	Val	Met	Ala	Leu	Ile	Leu	Leu	Ile	Leu	Cys	Val	Gly	Met	Val
				35					40					45
Val	Gly	Leu	Val	Ala	Leu	Gly	Ile	Trp	Ser	Val	Met	Gln	Arg	Asn
				50					55					60
Tyr	Leu	Gln	Asp	Glu	Asn	Glu	Asn	Arg	Thr	Gly	Thr	Leu	Gln	Gln
				65					70					75
Leu	Ala	Lys	Arg	Phe	Cys	Gln	Tyr	Val	Val	Lys	Gln	Ser	Glu	Leu
				80					85					90
Lys	Gly	Thr	Phe	Lys	Gly	His	Lys	Cys	Ser	Pro	Cys	Asp	Thr	Asn
				95					100					105
Trp	Arg	Tyr	Tyr	Gly	Asp	Ser	Cys	Tyr	Gly	Phe	Phe	Arg	His	Asn
				110					115					120
Leu	Thr	Trp	Glu	Glu	Ser	Lys	Gln	Tyr	Cys	Thr	Asp	Met	Asn	Ala

	125		130		135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile	Lys		
	140		145		150
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln	Lys		
	155		160		165
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser	Glu		
	170		175		180
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn	Cys		
	185		190		195
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu	Asn		
	200		205		210
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys	Val		
	215		220		225
Asp Gln Leu Pro					

<210> 425
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 425
 tgcagccct gtgacacaaa ctgg 24

<210> 426
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 426
 ctgagataac cgagccatcc tccac 26

<210> 427
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
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<400> 427
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428
 <211> 21
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<220>
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<400> 428
 ccaccaatgg cagccccacc t 21

 <210> 429
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 <212> DNA
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 <220>
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 <400> 429
 gactgccctc cctgccca 17

 <210> 430
 <211> 24
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 <400> 430
 caaaaagcct ggaagttctc aaag 24

 <210> 431
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 <220>
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 <400> 431
 cagctggact gcaggtgcta 20

 <210> 432
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 <212> DNA
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 <220>
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 <400> 432
 cagtgcac agcaagtgtc ct 22

 <210> 433
 <211> 28
 <212> DNA
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 <220>
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 <400> 433
 ggccacctcc ttgagttctc agttccct 28

 <210> 434
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 <400> 434
 caactactgg ctaaagctgg tga 24

 <210> 435
 <211> 27
 <212> DNA
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 <220>
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 <400> 435
 cctttctgta taggtgatac ccaatga 27

 <210> 436
 <211> 24
 <212> DNA
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 <223> Synthetic oligonucleotide probe

 <400> 436
 tggccatccc taccagaggc aaaa 24

 <210> 437
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 437
 ctgaagacga cgcggtattac ta 22

 <210> 438
 <211> 19
 <212> DNA
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 <220>
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 <400> 438
 ggcagaaatg ggaggcaga 19

 <210> 439
 <211> 30
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 <400> 439
 tgotctgttg gctacggctt tagtcctag 30

 <210> 440
 <211> 22

<212> DNA
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 <400> 440
 agcagcagcc atgtagaatg aa 22

 <210> 441
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 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 441
 aatacgaaca gtgcacgctg at 22

 <210> 442
 <211> 23
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 <400> 442
 tccagagagc caagcacggc aga 23

 <210> 443
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 <400> 443
 tctagccagc ttggctcaa ta 22

 <210> 444
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 <212> DNA
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 <220>
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 <400> 444
 cctggctcta gcaccaactc ata 23

 <210> 445
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 <220>
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 <400> 445
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<210> 446
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 <400> 446
 caggatacag tgggaatctt gaga 24

 <210> 447
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 <212> DNA
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 <400> 447
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 <210> 448
 <211> 24
 <212> DNA
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 <220>
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 <400> 448
 tctttggcca tttcccatgg ctca 24

 <210> 449
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 449
 cccatggcga ggaggaat 18

 <210> 450
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 450
 tgcgtacgtg tgccttcag 19

 <210> 451
 <211> 24
 <212> DNA
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 <220>
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<400> 451
 cagcacccca ggcagtctgt gtgt 24

 <210> 452
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 452
 aacgtgctac acgaccagtg tact 24

 <210> 453
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 453
 cacagcatat tcagatgact aaatcca 27

 <210> 454
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 454
 ttgtttagtt ctccaccgtg tctccacaga a 31

 <210> 455
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 455
 tgtcagaatg caacctggct t 21

 <210> 456
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 456
 tgatgtgcot ggctcagaac 20

 <210> 457
 <211> 24
 <212> DNA
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<220>
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 <400> 457
 tgcacctaga tgtccccagc accc 24

 <210> 458
 <211> 20
 <212> DNA
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 <220>
 <223> Synthetic oligonucleotide probe

 <400> 458
 aagatgcgcc aggcttctta 20

 <210> 459
 <211> 24
 <212> DNA
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 <220>
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 <400> 459
 ctcctgtacg gtctgctcac ttat 24

 <210> 460
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 <212> DNA
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 <400> 460
 tggctgtcag tccagtgtgc atgg 24

 <210> 461
 <211> 29
 <212> DNA
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 <400> 461
 gcatagggat agataagatc ctgctttat 29

 <210> 462
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 462
 caaattaaag taccatcag gagagaa 27

 <210> 463
 <211> 37

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 463
 aagttgctaa atatatacat tatctgcgcc aagtcca 37

 <210> 464
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 464
 gtgctgccca caattcatga 20

 <210> 465
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 465
 gtccttggtg tgggtctgaa ttatat 26

 <210> 466
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 466
 actctctgca cccacagtc accactatct c 31

 <210> 467
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 467
 ctgaggaacc agccatgtct ct 22

 <210> 468
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 468
 gaccagatgc aggtacagga tga 23

<210> 469
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 469
 ctgcccttc agtgatgccca acctt 25

 <210> 470
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 470
 ggggtggaggc tcaactgagta ga 22

 <210> 471
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 471
 caatacaggt aatgaaactc tgcttctt 28

 <210> 472
 <211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 472
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 <210> 473
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 473
 ggtggtcttg cttggtctca c 21

 <210> 474
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 474
 ccgtcgttca gcaacatgac 20

 <210> 475
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 475
 accgcctacc gctgtgccca 20

 <210> 476
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 476
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 <210> 477
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 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 477
 cctgagagca agaaggttga gaat 24

 <210> 478
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 478
 tagacaggga ccatggcccg ca 22

 <210> 479
 <211> 21
 <212> DNA
 <213> Artificial Sequence

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 <400> 479
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 <210> 480
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
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 <400> 480
 tccacacttg gccagtttat 20

 <210> 481
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
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 <400> 481
 cccaacttct cccttttgga ccct 24

 <210> 482
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 <223> Synthetic oligonucleotide probe

 <400> 482
 gtcccttcac tgtttagagc atga 24

 <210> 483
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 483
 actctcccc tcaacagcct cctgag 26

 <210> 484
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 484
 gtggtcaggg cagatccttt 20

 <210> 485
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 485
 acagatccag gagagactcc aca 23

 <210> 486
 <211> 21

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 486
 agcggcgctc ccagcctgaa t 21

 <210> 487
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 487
 catgattggt cctcagttcc atc 23

 <210> 488
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 488
 atagagggct ccagagaagtg 20

 <210> 489
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 489
 cagggccttc agggccttca c 21

 <210> 490
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 490
 gctcagccaa acactgtca 19

 <210> 491
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 491
 ggggccctga cagtgtt 17

<210> 492
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 492
ctgagccgag actggagcat ctacac 26

<210> 493
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 493
gtgggcagcg tcttgc 17

<210> 494
<211> 1231
<212> DNA
<213> Homo Sapien

<400> 494
cccacgcgtc cgcgcagtcg cgcagttctg cctccgctg ccagtcctgc 50
cgcgatccc ggcggggg tgtggcgtg actccgccc aggcagccag 100
cagcccgccg gggagccgga ccgccgcgg aggagctcgg acgcatgct 150
gagccccctc ctttgcgaa gcccgagtc ggagaagccc gggcaaaccg 200
aggctaagg gaccaaagcg gcgaagtcg gagacagcg acaagcagcg 250
gaggagaagg aggaggaggc gaaccagag aggggcagca aaagaagcgg 300
tgggtggtgg cgtcgtggcc atggcgccg ctatcgccag ctgcctcctc 350
cgtcagaaga ggcaagccg cgagcgcgag aaatccaac cgtgcaagtg 400
tgtcagcagc ccagcaaaag gcaagaccag ctgcgacaaa aacaagttaa 450
atgtcttttc ccgggtcaaa ctcttcggct ccaagaagag gcgcagaaga 500
agaccagagc ctacagctaa ggttatagtt accaagctat acagccgaca 550
aggctaccac ttgcagctgc aggcggatgg aaccattgat ggcacaaaag 600
atgaggacag caattacact ctgtttaacc tcattccctgt ggtctcgoga 650
gtggttgcta tcaaggagt toaaaccaag ctgtacttgg caatgaacag 700
tgagggtata ttgtacacct cggaactttt cacacctgag tgcaaaattca 750
aagaatcagt gtttgaaaat tattatgtga catattcatt aatgatatac 800
cgtcagcagc agtcaggccg aggggtggtat ctgggtctga acaagaaggg 850
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900

ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950
gatctcagcg agttctcccg atctggaagc gggaccccaa ccaagagcag 1000
aagtgtctct ggcgtgctga acggaggcaa atccatgagc cacaatgaat 1050
caacgtagcc agtgagggca aaagaagggc tctgtaacag aaccttacct 1100
ccagggtgctg ttgaattctt ctacgagtc ttcacccaaa agttcaaatt 1150
tgtcagtgac atttaccaaa caaacaggca gagttcacta ttctatctgc 1200
cattagacct tcttatcatc cataactaaag c 1231

<210> 495
<211> 245
<212> PRT
<213> Homo Sapien

<400> 495
Met Ala Ala Ala Ile Ala Ser Ser Leu Ile Arg Gln Lys Arg Gln
1 5 10 15
Ala Arg Glu Arg Glu Lys Ser Asn Ala Cys Lys Cys Val Ser Ser
20 25 30
Pro Ser Lys Gly Lys Thr Ser Cys Asp Lys Asn Lys Leu Asn Val
35 40 45
Phe Ser Arg Val Lys Leu Phe Gly Ser Lys Lys Arg Arg Arg Arg
50 55 60
Arg Pro Glu Pro Gln Leu Lys Gly Ile Val Thr Lys Leu Tyr Ser
65 70 75
Arg Gln Gly Tyr His Leu Gln Leu Gln Ala Asp Gly Thr Ile Asp
80 85 90
Gly Thr Lys Asp Glu Asp Ser Thr Tyr Thr Leu Phe Asn Leu Ile
95 100 105
Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Gln Thr Lys
110 115 120
Leu Tyr Leu Ala Met Asn Ser Glu Gly Tyr Leu Tyr Thr Ser Glu
125 130 135
Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe Glu Asn
140 145 150
Tyr Tyr Val Thr Tyr Ser Ser Met Ile Arg Gln Gln Gln Ser
155 160 165
Gly Arg Gly Trp Tyr Leu Gly Leu Asn Lys Glu Gly Glu Ile Met
170 175 180
Lys Gly Asn His Val Lys Lys Asn Lys Pro Ala Ala His Phe Leu
185 190 195
Pro Lys Pro Leu Lys Val Ala Met Tyr Lys Glu Pro Ser Leu His
200 205 210
Asp Leu Thr Glu Phe Ser Arg Ser Gly Ser Gly Thr Pro Thr Lys

Ser Arg Ser Val Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser
230 235 240

His Asn Glu Ser Thr
245

<210> 496

<211> 1471

<212> DNA

<213> Homo Sapien

<400> 496

ccaggatgga gctggggcct gtatagccat attattgttc tatgtacta 50
gacatggggg ggacttgggt aaaaaggat tatccagcca gaggtcttg 100
gagccctgtc ttactgaacc tgggcaacct ggatattctg agacatat 150
tggggggatt tcaagtgaata aagtggggga tccctccat ttagagtga 200
gcaaaagaaa aaacaccaag gttgggttcc ttctgacat tggcagtgc 250
ccagtggggg tgggatgagc gaattattcc aaagctaaag tccacaccc 300
tgtagattac aagagtggat ttggcaggag tgtgcccac aatacagtgg 350
aaaggtgcct gaagatat 11 aaaccacgtc ttggaaat 11 agtgggtctt 400
ggctttggga taggtgaagt gagcacagac actggagagg agggaaagg 450
gacgttttca ataggaggca aaactcgagg gtgggatcca ctgaggagta 500
cataggctgc tggatctggt ggagccagca ctggggccac ggggtgtaac 550
tggctgctgt ggaggggggt acgtgagggg ggggtctggg gcttacctc 600
aggctctgtg ggtggggcag cgagtcgggg cctgagcgtc aagagcatgc 650
cctagtgagc gggctcctct gggggagccc agcgcctcc gggcgctgc 700
cggtttgggg gtgtctctc ccggggcgct atggcgcgcg tggccagtga 750
cctgatccgg cagaagcggg aggtccgcga gcccgggggc agccggccgg 800
tgtcggcga gcggcgctg tgtccccgcg gcaccaagtc cctttgccag 850
aagcagctcc tcatcctgct gtcaaagggt cgaactgtcg gggggcggcc 900
cgcgcgccg gaccgcggcc cggagcctca gtccaaaggc atcgtaacca 950
aactgtctg ccgccagggt ttctacctcc aggcgaatcc cgacggaagc 1000
atccaggcca cccagagga taccagctcc ttcacctact tcaacctgat 1050
cctgtgggg ctcctgtggt taccatcca gagcgccaag ctgggtcaact 1100
acatggccat gaatgctgag ggaactgctct acagttcgcc gcatttcaca 1150
gctgagtgtc gctttaagga gtgtgtcttt gagaattact acgtctctga 1200
cgctctgct ctctaccgcc agcgtcgttc tggccggggc tggtaacctg 1250

gcctggacaa ggagggccag gtcataagg gaaaccgagt taagaagacc 1300
aaggcagctg cccactttct gcccaagctc ctggagggtg ccatgtacca 1350
ggagccttct ctccacagtg tccccgaggc ctccccttcc agtccccctg 1400
ccccctgaaa tgtagtcctt ggactggagg ttccctgcac tccagtgag 1450
ccagccacca ccacaacctg t 1471

<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

Met	Ala	Ala	Leu	Ala	Ser	Ser	Leu	Ile	Arg	Gln	Lys	Arg	Glu	Val
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Arg	Glu	Pro	Gly	Gly	Ser	Arg	Pro	Val	Ser	Ala	Gln	Arg	Arg	Val
			20						25				30	
Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile
			35						40				45	
Leu	Leu	Ser	Lys	Val	Arg	Leu	Cys	Gly	Gly	Arg	Pro	Ala	Arg	Pro
			50						55				60	
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu
			65						70				75	
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser
			80						85				90	
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn
			95						100				105	
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys
			110						115				120	
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser
			125						130				135	
Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe
			140						145				150	
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg
			155						160				165	
Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln
			170						175				180	
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His
			185						190				195	
Phe	Leu	Pro	Lys	Leu	Leu	Glu	Val	Ala	Met	Tyr	Gln	Glu	Pro	Ser
			200						205				210	
Leu	His	Ser	Val	Pro	Glu	Ala	Ser	Pro	Ser	Ser	Pro	Pro	Ala	Pro
			215						220				225	

<210> 498

<211> 744

<212> DNA
<213> Homo Sapien

<400> 498
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ggagcagcagc tgggaccggc cgtctgccag caggaggcgg agcagcccca 100
gcaagaaccg cgggctctgc aacggcaacc tgggtgatat cttctccaaa 150
gtgcgcctct tcggcctcaa gaagcgaggc ttgcggcgcc aagatcccca 200
gtctcaagggt atagtgaaca ggttatattg caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctcatggaa ccaaggatga cagcactaat 300
tctacactct tcaacctcat accagtggga ctactgttg ttgccatcca 350
gggagtgaac acagggttgt atatagccat gaattggaga ggttacctct 400
acccatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450
gaaaattatt atgtaatcta ctcatccatg ttgtacagac aacaggaatc 500
tggttagagcc tgggttttgg gattaataaa ggaagggcaa gctatgaaag 550
ggaacagagt aaagaaaacc aaaccagcag ctcattttct acccaagcca 600
ttggaagtgt ccatgtaccg agaaccatct ttgcatgatg ttgggggaaa 650
ggccccgaag cctggggtga cgccaagtaa aagcacaagt gcgtctgcaa 700
taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

<210> 499
<211> 247
<212> PRT
<213> Homo Sapien

<400> 499
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln 15
1 5 10
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg 30
20 25
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val 45
35 40
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg 60
50 55
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu 75
65 70
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala 90
80 85
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn 105
95 100
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys 120
110 115

Thr Gly Leu Tyr Ile Ala Met Asn Gly Glu Gly Tyr Leu Tyr Pro
 125 130 135
 Ser Glu Leu Phe Thr Pro Glu Cys Lys Phe Lys Glu Ser Val Phe
 140 145 150
 Glu Asn Tyr Tyr Val Ile Tyr Ser Ser Met Leu Tyr Arg Gln Gln
 155 160 165
 Glu Ser Gly Arg Ala Trp Phe Leu Gly Leu Asn Lys Glu Gly Gln
 170 175 180
 Ala Met Lys Gly Asn Arg Val Lys Lys Thr Lys Pro Ala Ala His
 185 190 195
 Phe Leu Pro Lys Pro Leu Glu Val Ala Met Tyr Arg Glu Pro Ser
 200 205 210
 Leu His Asp Val Gly Glu Thr Val Pro Lys Pro Gly Val Thr Pro
 215 220 225
 Ser Lys Ser Thr Ser Ala Ser Ala Ile Met Asn Gly Gly Lys Pro
 230 235 240
 Val Asn Lys Ser Lys Thr Thr
 245

<210> 500
 <211> 2906
 <212> DNA
 <213> Homo Sapien

<400> 500
 ggggagagga attgaccatg taaaaggaga cttttttttt tgggtgtggt 50
 ggctgttggg tgcottgcaa aaatgaagga tgcaggacgc agctttctcc 100
 tggaaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200
 acacagggag cattcaagaa tgaaataaac cagagttaga cccgcggggg 250
 ttggtgtgtt ctgacataaa taaataatct taaagcagct gttccctccc 300
 ccaccccaaa aaaaaaggat gattggaaat gaagaaccga ggattcaca 350
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400
 gatatttttg gaatgaaaag tttggggcct ttttagtaaa gtaaaagaact 450
 ggtgtggtgg tgttttcctt tctttttgaa ttcccccaca gaggagagga 500
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550
 gcagattgag gcattgattg ggggagagaa accagcagag cacagtgtga 600
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650
 ttcacacacc tctttttttt taaattttta ttcttttttg tatcaagatc 700
 atgcgttttc tcttgttctt aaccacctgg atttccatct ggatgttgct 750

gtgatcagtc tgaatacaaa ctgtttgaat tccagaagga ccaacaccag 800
 ataaattatg aatgttgaac aagatgacct tacatccaca gcagataatg 850
 ataggtccta ggtttaacag ggcctattt gacccctgc tctgtgtgct 900
 gctggctctt caactctctg tgggtgctgg tctggtgcgg gctcagacct 950
 gccctctctg gtgctcctgc agcaaccagt tcagcaaggt gatttgtgtt 1000
 cggaaaaaac tgcgtgaggt tccggatggc atctccacca acacacggct 1050
 gctgaacctc catgagaacc aaatccagat catcaaagt aacagcttca 1100
 agcacttgag gcacttgga atctacagt tgagtaggaa ccatatcaga 1150
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 tgtctaaact gaaggagctc tggttgcgaa acaaccccat tgaagcacc 1300
 cctcttatg cttttaacag aattcctctt ttgcgcgcac tagacttagg 1350
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 ccaacttgag gtatttgaac ctggccatgt gcaaccttcg ggaatccct 1450
 aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500
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 attacttcac atgctatgct ccgggtgattg tggagccccc tgcagacctc 1900
 aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacato 1950
 cctgacatct gtatcttggg ttactocaaa tggaacagtc atgacacatg 2000
 gggcgtaaaa agtgcggata gctgtgctca gtgatgttac gttaaatttc 2050
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 ttccgttggg aatactactg cttcagccac cctgaatgtt actgcagcaa 2150
 ccactactcc tttctcttac ttttcaaccg tcacagtaga gactatggaa 2200
 ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtccactccc 2250
 agtggctgac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300
 gcacaaggct gcagagagaa accttcacca tcccagtgac tgatataaac 2350

agtgggatcc caggaattga tgaggtcatg aagactacca aaatcatcat 2400
 tgggtgtttt gtggccatca cactcatggc tgcagtgatg ctggtcattt 2450
 tctacaagat gaggaagcag caccatcggc aaaaccatca cgcccaaca 2500
 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550
 catggaagc cacctgcccc tgccgtctat cgagcatgag cacctaaatc 2600
 actataactc atacaatatc ccttcaacc acacaacaac agttaacaca 2650
 ataaattcaa tacacagttc agtgcataaa ccgttattga tccgaatgaa 2700
 ctctaaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750
 caaaaaacaa acaatcaaaa aaaaagacag ttattaaaa atgacacaaa 2800
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaacaaa 2850
 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaaagcaga 2900
 caaaaa 2906

<210> 501
 <211> 640
 <212> PRT
 <213> Homo Sapien

<400> 501
 Met Leu Asn Lys Met Thr Leu His Pro Gln Gln Ile Met Ile Gly
 1 5 10 15
 Pro Arg Phe Asn Arg Ala Leu Phe Asp Pro Leu Leu Val Val Leu
 20 25 30
 Leu Ala Leu Gln Leu Leu Val Val Ala Gly Leu Val Arg Ala Gln
 35 40 45
 Thr Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val
 50 55 60
 Ile Cys Val Arg Lys Asn Leu Arg Glu Val Pro Asp Gly Ile Ser
 65 70 75
 Thr Asn Thr Arg Leu Leu Asn Leu His Glu Asn Gln Ile Gln Ile
 80 85 90
 Ile Lys Val Asn Ser Phe Lys His Leu Arg His Leu Glu Ile Leu
 95 100 105
 Gln Leu Ser Arg Asn His Ile Arg Thr Ile Glu Ile Gly Ala Phe
 110 115 120
 Asn Gly Leu Ala Asn Leu Asn Thr Leu Glu Leu Phe Asp Asn Arg
 125 130 135
 Leu Thr Thr Ile Pro Asn Gly Ala Phe Val Tyr Leu Ser Lys Leu
 140 145 150
 Lys Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser
 155 160 165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly	170	175	180
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	185	190	195
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg	200	205	210
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp	215	220	225
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln	230	235	240
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile	245	250	255
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	260	265	270
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp	275	280	285
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His	290	295	300
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp	305	310	315
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	320	325	330
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp	335	340	345
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro	350	355	360
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys	365	370	375
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn	380	385	390
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val	395	400	405
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp	410	415	420
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	425	430	435
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	440	445	450
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	455	460	465
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	470	475	480

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro	485	495
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr	500	510
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr	515	525
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala	530	540
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His	545	555
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn	560	570
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu	575	585
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser	590	600
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn	605	615
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn	620	630
Ser	Lys	Asp	Asn	Val	Gln	Glu	Thr	Gln	Ile						635	640

<210> 502

<211> 2458

<212> DNA

<213> Homo Sapien

<400> 502

g c g c c g g g a g c c c a t c t g c c c c a g g g g c a c g g g g c g c g g g c c t c c 50

c g c c c g g c a c a t g g t c g a g c c a c t c g c g c g c a c c c c c g a g g c c c g c 100

c a g c t c g c c c a g a g g t c c g t c g a g g c g c c c g g c c g c c c c g a g c c a a g c 150

a g c a a c t g a g c g g g g a a g c g c c g c g t c c g g g a t c g g g a t g t c c c t c t 200

c t t t c t c t c t t g t g t a g t t t c t a c t a t g t t g g a a c c t t g g g a c t c a c a 250

c t g a g a t c a a g a g a g t g g c a g a g a a a a g t a c t t t g c c c t g c c a c c a t 300

c a a c t g g g g c t t c c a g a a a a a g a c a c t c t g a t a t t g a a t g g t g c t c a c 350

c g a t a a t g a a g g g a a c c a a a a a g t g g t g a t c a c t t a c t c c a g t c g t c a t g 400

t c t a c a a t a a c t t g a c t g a g g a c a g a a g g c c g a g t g g c c t t t g c t t c c 450

a a t t t c t c t g g c a g g a g a t g c c t c c t t g c a g a t t g a a c c t c t g a a g c c c a g 500

t g a t g a g g g c c g g t a c a c c t g t a a g g t t a a g a a t t c a g g g c g t a c g t g t 550

g g a g c c a t g t c a t c t t a a a a g t c t t a g t g a g a c c a t c c a a g c c a a g t g t 600

gagtgtggaag gagagctgac agaaggaagt gacctgactt tgcagtgtga 650
 gtcacacctt ggcacagagc ccattgtgta ttactggcag cgaatccgag 700
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 aaccaccctg gacgagttct gctgcagaat cttaccatgt cctactctgg 800
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<210> 503
 <211> 373
 <212> PRT
 <213> Homo Sapien

<400> 503

Met	Ser	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Val	Ser	Tyr	Tyr	Val	Gly
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Thr	Leu	Gly	Thr	His	Thr	Glu	Ile	Lys	Arg	Val	Ala	Glu	Glu	Lys
				20					25					30
Val	Thr	Leu	Pro	Cys	His	His	Gln	Leu	Gly	Leu	Pro	Glu	Lys	Asp
				35					40					45
Thr	Leu	Asp	Ile	Glu	Trp	Leu	Leu	Thr	Asp	Asn	Glu	Gly	Asn	Gln
				50					55					60
Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn	Asn	Leu
				65					70					75
Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn	Phe	Leu
				80					85					90
Ala	Gly	Asp	Ala	Ser	Leu	Gln	Ile	Glu	Pro	Leu	Lys	Pro	Ser	Asp
				95					100					105
Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg	Tyr	Val
				110					115					120
Trp	Ser	His	Val	Ile	Leu	Lys	Val	Leu	Val	Arg	Pro	Ser	Lys	Pro
				125					130					135
Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp	Leu	Thr
				140					145					150
Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val	Tyr	Tyr
				155					160					165
Trp	Gln	Arg	Ile	Arg	Glu	Lys	Glu	Gly	Glu	Asp	Glu	Arg	Leu	Pro
				170					175					180
Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu	Leu
				185					190					195
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr	Ala
				200					205					210
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Thr	Val
				215					220					225

Gln Tyr Val Gln Ser Ile Gly Met Val Ala Gly Ala Val Thr Gly	230	235	240
Ile Val Ala Gly Ala Leu Leu Ile Phe Leu Leu Val Trp Leu Leu	245	250	255
Ile Arg Arg Lys Asp Lys Glu Arg Tyr Glu Glu Glu Arg Pro	260	265	270
Asn Glu Ile Arg Glu Asp Ala Glu Ala Pro Lys Ala Arg Leu Val	275	280	285
Lys Pro Ser Ser Ser Ser Ser Gly Ser Arg Ser Ser Arg Ser Gly	290	295	300
Ser Ser Ser Thr Arg Ser Thr Ala Asn Ser Ala Ser Arg Ser Gln	305	310	315
Arg Thr Leu Ser Thr Asp Ala Ala Pro Gln Pro Gly Leu Ala Thr	320	325	330
Gln Ala Tyr Ser Leu Val Gly Pro Glu Val Arg Gly Ser Glu Pro	335	340	345
Lys Lys Val His His Ala Asn Leu Thr Lys Ala Glu Thr Thr Pro	350	355	360
Ser Met Ile Pro Ser Gln Ser Arg Ala Phe Gln Thr Val	365	370	

<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
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 ctccctgtgcg gagtagtgga ttccgccaga agtttgagta tccactactcc 150
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
 aatttacgct tagtcccgaa gaccagggac cgctggacat cgagtggctg 250
 atatcaccag ctgataatca gaaggtggat caagtgatta ttttatattc 300
 tggagacaaa atttatgatg actactatcc agatctgaaa gccgcagatc 350
 attttacgag taatgatctc aaatctggtg atgcatcaat aaatgtaacg 400
 aatttacaac tgtcagatat tggcacatat cagtgcaaag tgaaaaaagc 450
 tcctgtgtgt gcaataaaga agattcatct ggtagttctt gtttagcctt 500
 caggtgcgag atgttacgtt gatggatctg aagaaattgg aagtgacttt 550
 aagataaaat gtgaacaaaa agaaggttca cttccattac agtatgagt 600
 gcaaaaattg tctgactcac agaaaatgcc cacttcatgg tttagcagaaa 650
 tgacttcata tgttatatct gtaaaaaatg cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgac agtgccctgtt 750
 gcgtctaaac gttgtccctc cttaaataa agctggacta attgcaggag 800
 ccattatag aactttgctt gctctagcgc tcattggtct tatcatcttt 850
 tgctgtcgta aaaagcgag agaagaaaa tatgaaaagg aagtcatca 900
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 gaagctacat cggcagtaat cattcatccc tgggggccat gtctccttc 1000
 aacatggaag gatattccaa gactcagtat aaccaagta caagtgaaga 1050
 ctttgaagc actcctcaga gtccgactct cccacctgct aagtcaagt 1100
 acccttaca gactgatgga attacagttg tataaatatg gactactgaa 1150
 gaatctgaag tattgtatta ttgacttta ttttaggcct ctagtaaaga 1200
 cttaaatgtt ttttaaaaa agcacaaggc acagagatta gagcagctgt 1250
 aagaacacat ctactttatg caatggcatt agacatgta gtcagatgtc 1300
 atgtcaaat tagtacgagc caattcttt gttaaaaaa cctatgtata 1350
 gtgacactga tagttaaaag atgttttatt atattttcaa taactaccac 1400
 taacaaattt ttaacttttc atatgcatat tctgatatgt ggtcttttag 1450
 gaaaagtatg gtaaatagtt gatttttcaa aggaaatttt aaaattotta 1500
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 ctcaaactat tttttatttg caactacatg atttoacaca attctcttaa 1650
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 tatcaatato taaagtgcatt atattttta agaaagatta ttctcaataa 1900
 cttctataaa aataagtttg atggtttggc ccactctaat tcaactat 1950
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 atgttctc acataagtgg gaggtaatga taagaactta tgaacacaaa 2750
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 gatgaaataa tatgtacaac aaatccctgt gacacatgtt tacctatgga 2900
 acaaaccttc atgtgtatcc ctaaacctaa aataaaagt aaaaaaaaaa 2950
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<210> 505
 <211> 352
 <212> PRT
 <213> Homo Sapien

<400> 505
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 Phe Ala Arg Ser Leu Ser Ile Thr Thr Pro Glu Glu Met Ile Glu
 20 25 30
 Lys Ala Lys Gly Glu Thr Ala Tyr Leu Pro Cys Lys Phe Thr Leu
 35 40 45
 Ser Pro Glu Asp Gln Gly Pro Leu Asp Ile Glu Trp Leu Ile Ser
 50 55 60
 Pro Ala Asp Asn Gln Lys Val Asp Gln Val Ile Ile Leu Tyr Ser
 65 70 75
 Gly Asp Lys Ile Tyr Asp Asp Tyr Tyr Pro Asp Leu Lys Gly Arg
 80 85 90
 Val His Phe Thr Ser Asn Asp Leu Lys Ser Gly Asp Ala Ser Ile
 95 100 105
 Asn Val Thr Asn Leu Gln Leu Ser Asp Ile Gly Thr Tyr Gln Cys
 110 115 120
 Lys Val Lys Lys Ala Pro Gly Val Ala Asn Lys Lys Ile His Leu

	125		130		135
Val Val Leu Val Lys Pro Ser Gly Ala Arg Cys Tyr Val Asp Gly	140		145		150
Ser Glu Glu Ile Gly Ser Asp Phe Lys Ile Lys Cys Glu Pro Lys	155		160		165
Glu Gly Ser Leu Pro Leu Gln Tyr Glu Trp Gln Lys Leu Ser Asp	170		175		180
Ser Gln Lys Met Pro Thr Ser Trp Leu Ala Glu Met Thr Ser Ser	185		190		195
Val Ile Ser Val Lys Asn Ala Ser Ser Glu Tyr Ser Gly Thr Tyr	200		205		210
Ser Cys Thr Val Arg Asn Arg Val Gly Ser Asp Gln Cys Leu Leu	215		220		225
Arg Leu Asn Val Val Pro Pro Ser Asn Lys Ala Gly Leu Ile Ala	230		235		240
Gly Ala Ile Ile Gly Thr Leu Leu Ala Leu Ala Leu Ile Gly Leu	245		250		255
Ile Ile Phe Cys Cys Arg Lys Lys Arg Arg Glu Glu Lys Tyr Glu	260		265		270
Lys Glu Val His His Asp Ile Arg Glu Asp Val Pro Pro Pro Lys	275		280		285
Ser Arg Thr Ser Thr Ala Arg Ser Tyr Ile Gly Ser Asn His Ser	290		295		300
Ser Leu Gly Ser Met Ser Pro Ser Asn Met Glu Gly Tyr Ser Lys	305		310		315
Thr Gln Tyr Asn Gln Val Pro Ser Glu Asp Phe Glu Arg Thr Pro	320		325		330
Gln Ser Pro Thr Leu Pro Pro Ala Lys Phe Lys Tyr Pro Tyr Lys	335		340		345
Thr Asp Gly Ile Thr Val Val	350				

<210> 506

<211> 1705

<212> DNA

<213> Homo Sapien

<400> 506

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ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150

ggacaagaca tgactgtgat gaggagctgc ttctgccaat ttaacaccaa 200

gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

agatgaattt tcaacagagg ctgcaaagcc tgtggacttt agccagacc 300
 ttctgcccct ctttgctggc gacagcctct caaatgcaga tggttgtgct 350
 cccttgccgt ggttttacc tgccttctctg gagccaggta tcagggggccc 400
 agggccaaga attccacttt gggccctgcc aagtgaaggg ggttgttccc 450
 cagaaactgt ggaagcctt ctgggctgtg aaagacacta tgcaagctca 500
 ggataacatc acgagtggcc ggctgctgca gcaggagggt ctgcagaacg 550
 tctcgtagtc tgagagctgt taccttgtcc acacctgctt ggagttctac 600
 ttgaaaactg ttttcaaaaa ccaccacaat agaacagttg aagtcaggac 650
 tctgaagtc tctctactc tggccaacaa ctttgttctc atcgtgtcac 700
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 aaaaa 1705

<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

Met	Asn	Phe	Gln	Gln	Arg	Leu	Gln	Ser	Leu	Trp	Thr	Leu	Ala	Arg
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Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met
				20					25					30
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln
				35					40					45
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln
				50					55					60
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala
				65					70					75
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg
				80					85					90
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser
				95					100					105
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val
				110					115					120
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys
				125					130					135
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln
				140					145					150
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser
				155					160					165
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu
				170					175					180
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile
				185					190					195
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu				
				200					205					

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

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cggtctcagg agatgtctga ttccacaga catgcacatc atagaagaga 150
gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaaat 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agccottaga 250
tgtgtgtctg gtgaccaaga acctctgggc gttctacgtg gacagggtgt 300

tcaaggatca tcaggagcca aacccccaaaa ttttgagaaa aatcagcagc 350
 attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400
 acagaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450
 tccatgacaa ctatgatcag ctggagggtcc acgctgctgc cattaataatcc 500
 ctggggagagc togacgtctt tctagccttg attaataaga atcatgaagt 550
 aatgtttctca gcttgatgac aaggaaacctg tatagtgatc cagggatgaa 600
 caccacctgt gcggtttact gtgggagaca gccacacctg aaggggaagg 650
 agatggggaa ggccccttgc agctgaaagt cccactggct ggcctcaggc 700
 tgtcttattc cgcttgaaaa taggcacaaa gtctactgtg gtatttgtaa 750
 taaactctat ctgctgaaag ggcctgcagg ccctcctggg agtaaagggc 800
 tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
 tgagccaagt gatatactgt agtacacatt gtactgagtg gtttttctga 900
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<210> 509

<211> 177

<212> PRT

<213> Homo Sapien

<400> 509

Met	Lys	Leu	Gln	Cys	Val	Ser	Leu	Trp	Leu	Leu	Gly	Thr	Ile	Leu
1				5					10					15
Ile	Leu	Cys	Ser	Val	Asp	Asn	His	Gly	Leu	Arg	Arg	Cys	Leu	Ile
				20					25					30
Ser	Thr	Asp	Met	His	His	Ile	Glu	Glu	Ser	Phe	Gln	Glu	Ile	Lys
				35					40					45
Arg	Ala	Ile	Gln	Ala	Lys	Asp	Thr	Phe	Pro	Asn	Val	Thr	Ile	Leu
				50					55					60
Ser	Thr	Leu	Glu	Thr	Leu	Gln	Ile	Ile	Lys	Pro	Leu	Asp	Val	Cys
				65					70					75
Cys	Val	Thr	Lys	Asn	Leu	Leu	Ala	Phe	Tyr	Val	Asp	Arg	Val	Phe
				80					85					90
Lys	Asp	His	Gln	Glu	Pro	Asn	Pro	Lys	Ile	Leu	Arg	Lys	Ile	Ser
				95					100					105
Ser	Ile	Ala	Asn	Ser	Phe	Leu	Tyr	Met	Gln	Lys	Thr	Leu	Arg	Gln
				110					115					120
Cys	Gln	Glu	Gln	Arg	Gln	Cys	His	Cys	Arg	Gln	Glu	Ala	Thr	Asn
				125					130					135
Ala	Thr	Arg	Val	Ile	His	Asp	Asn	Tyr	Asp	Gln	Leu	Glu	Val	His
				140					145					150
Ala	Ala	Ala	Ile	Lys	Ser	Leu	Gly	Glu	Leu	Asp	Val	Phe	Leu	Ala

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

<400> 510
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tccacagggtg tccactocca ggtccaactg caccctcggtt ctatcgataa 200
tctcagcacc agccactcag agcagggcac gatgttggg gcccgctca 250
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gcctatccca atgcctccc actgctcggc tccagctggg gtggcctgat 350
ccacctgtac acagccaag ccaggaacag ctaccacctg cagatccaca 400
agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgcctg 450
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tcctgtccc gaggaacgag atccccctaa ttcactcaa ccccccata 750
ccacggcggc acaccggag cgccgaggac gactcggagc gggaccccct 800
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cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgaccca 900
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<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
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1 5 10 15
Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
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Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	45
				35					40						
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	60
				50					55						
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	75
				65					70						
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	90
				80					85						
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	105
				95					100						
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	120
				110					115						
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	135
				125					130						
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	150
				140					145						
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	165
				155					160						
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	180
				170					175						
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	195
				185					190						
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	210
				200					205						
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	225
				215					220						
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	240
				230					235						
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					250
				245					250						

<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

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 gacgagacac tgcgatgaca acggacgaca cagaagtgcc cgctatgact 200
 ctagcaccgg gccacggcg tctggaaact caaacgtga gcgctgagac 250
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<210> 513
 <211> 482
 <212> PRF
 <213> Homo Sapien

<400> 513
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 35 40 45
 Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
 50 55 60
 Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
 65 70 75
 Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
 80 85 90
 Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
 95 100 105
 Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
 110 115 120
 Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
 125 130 135
 Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
 140 145 150
 Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
 155 160 165
 Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
 170 175 180
 Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
 185 190 195
 Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
 200 205 210
 Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
 215 220 225
 Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
 230 235 240
 Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
 245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	
				260					265					270	
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser	
				275					280					285	
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile	
				290					295					300	
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr	
				305					310					315	
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro	
				320					325					330	
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr	
				335					340					345	
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu	
				350					355					360	
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val	
				365					370					375	
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly	
				380					385					390	
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro	
				395					400					405	
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr	
				410					415					420	
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro	
				425					430					435	
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr	
				440					445					450	
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met	
				455					460					465	
Lys	Pro	Gln	Gln	Pro	Arg	Pro	Arg	Leu	Pro	Gly	Arg	Gly	Arg	Pro	
				470					475					480	

Gln Thr

<210> 514

<211> 2284

<212> DNA

<213> Homo Sapien

<400> 514

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ggcgccgggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150

cttcttaaa caaactaaga ccagaggagg gattatcctt gacctttgaa 200

gaccaaact aaactgaaat ttaaaatgtt cttcggggga gaaggagct 250

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<210> 515

<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

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Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu	35	40	45	50
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln	50	55	60	65
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly	65	70	75	80
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala	80	85	90	95
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala	95	100	105	110
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile	110	115	120	125
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Lys	Pro	Ser	Gln	Glu	Leu	125	130	135	140
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val	140	145	150	155
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp	155	160	165	170
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp	170	175	180	185
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu	185	190	195	

Leu Ala Tyr Lys Glu Lys Gly His Ser Gln Ser Ser Gln Phe Ser 200 210
 Ser Asp Gln Glu Ile Ala His Leu Leu Pro Glu Asn Val Ser Ala 215 225
 Leu Pro Ala Thr Val Ala Val Ala Ser Pro His Thr Thr Ser Ala 230 240
 Thr Pro Lys Pro Ala Thr Leu Leu Pro Thr Asn Ala Ser Val Thr 245 255
 Pro Ser Gly Thr Ser Gln Pro Gln Leu Ala Thr Thr Ala Pro Pro 260 270
 Val Thr Thr Val Thr Ser Gln Pro Pro Thr Thr Leu Ile Ser Thr 275 285
 Val Phe Thr Arg Ala Ala Ala Thr Leu Gln Ala Met Ala Thr Thr 290 300
 Ala Val Leu Thr Thr Thr Phe Gln Ala Pro Thr Asp Ser Lys Gly 305 315
 Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu 320 330
 Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn 335 345
 Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg 350 360
 Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn 365 375
 Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu 380 390
 Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly 395 405
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<210> 516

<211> 2749

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

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 gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<210> 517
 <211> 332
 <212> PRT
 <213> Homo Sapien

<400> 517
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 Tyr Glu Ala Leu Glu Gly Pro Glu Glu Ile Ser Gly Phe Glu Gly
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 Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Glu Leu Arg Asp
 35 40 45
 His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg
 50 55 60
 Cys Ser Gly Thr Ile Tyr Ala Glu Glu Gly Gln Glu Thr Met
 65 70 75

Lys	Gly	Arg	Val	Ser	Ile	Arg	Asp	Ser	Arg	Gln	Glu	Leu	Ser	Leu	
				80					85						90
Ile	Val	Thr	Leu	Trp	Asn	Leu	Thr	Leu	Gln	Asp	Ala	Gly	Glu	Tyr	
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Trp	Cys	Gly	Val	Glu	Lys	Arg	Gly	Pro	Asp	Glu	Ser	Leu	Leu	Ile	
				110					115					120	
Ser	Leu	Phe	Val	Phe	Pro	Gly	Pro	Cys	Cys	Pro	Pro	Ser	Pro	Ser	
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Pro	Thr	Phe	Gln	Pro	Leu	Ala	Thr	Thr	Arg	Leu	Gln	Pro	Lys	Ala	
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Lys	Ala	Gln	Gln	Thr	Gln	Pro	Pro	Gly	Leu	Thr	Ser	Pro	Gly	Leu	
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Tyr	Pro	Ala	Ala	Thr	Thr	Ala	Lys	Gln	Gly	Lys	Thr	Gly	Ala	Glu	
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Ala	Pro	Pro	Leu	Pro	Gly	Thr	Ser	Gln	Tyr	Gly	His	Glu	Arg	Thr	
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Ser	Gln	Tyr	Thr	Gly	Thr	Ser	Pro	His	Pro	Ala	Thr	Ser	Pro	Pro	
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Ala	Gly	Ser	Ser	Arg	Pro	Pro	Met	Gln	Leu	Asp	Ser	Thr	Ser	Ala	
				215					220					225	
Glu	Asp	Thr	Ser	Pro	Ala	Leu	Ser	Ser	Gly	Ser	Ser	Lys	Pro	Arg	
				230					235					240	
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu	
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Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His	
				260					265					270	
Leu	Leu	Leu	Trp	Arg	Lys	Glu	Ala	Gln	Gln	Ala	Thr	Glu	Thr	Gln	
				275					280					285	
Arg	Asn	Glu	Lys	Phe	Trp	Leu	Ser	Arg	Leu	Thr	Ala	Glu	Glu	Lys	
				290					295					300	
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro	
				305					310					315	
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val	
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